SMITHSONIAN INSTITUTION

MUSEUM PROGRAMS, SCIENTIFIC AND CULTURAL RESEARCH (SPECIAL FOREIGN CURRENCY PROGRAM)

LIST OF PROJECTS

Submitted as a supplement to the fiscal year 1975 budget.

February 1974

MUSEUM PROGRAMS, SCIENTIFIC AND CULTURAL RESEARCH
(SPECIAL FOREIGN CURRENCY PROGRAM)

LIST OF PROJECTS

This list of illustrative projects submitted in support of the appropriation request for FY 1975 is based upon 1) on-going research projects of United States institutions already being supported by the Smithsonian in countries where the United States has accumulated local currencies in "excess" to its needs; 2) similar pending research projects being developed which have either been approved in principle or are in the process of review both by the Smithsonian and by the government of the appropriate "excess-currency" country; and 3) new research projects which represent the Institution's selection of those illustrative projects which appear most promising for development and possible funding during FY 1975. New projects listed are based on firm indications of interest from United States institutions and scholars contemplating research abroad.

Actual funding of all new projects, and of those pending projects not yet finally approved, remains contingent upon 1) favorable competitive review on the basis of merit by scholars most competent to judge the worth of each proposal (regularly constituted Advisory Councils assist the Smithsonian in making this competitive review of proposals); 2) review and approval of each project as not contrary to the United States national interest by the Department of State and American embassies abroad; 3) review and approval of each project by the appropriate agency of the host country; 4) where required, conclusion of a satisfactory agreement between the United States grantee of the Smithsonian and an appropriate collaborating institution in the host country.

In the same fashion, on-going projects are subject to continuing competitive review, if funding is to be continued.

This means that Smithsonian Foreign Currency Program funds are committed both by discipline and by country in accordance with the best judgment as to the competitive merit of each project. The following "List of Projects" represents the Institution's best judgment at this time as to how funds, available and requested, will be committed. However, some of the projects listed could be eliminated by an unfavorable review, a finding that the project was not in the U.S. interest, a failure of the host country to approve the project or, in the case of joint projects, a failure of the American and host country collaborators to agree on the conduct of the project.

On the other hand, projects not anticipated in this illustrative list but submitted to the Smithsonian Foreign Currency Program by United States institutions could prove to have greater acceptance, both here and abroad, and hence be funded ahead of or in place of some of the projects listed.

Because Morocco was removed from the Treasury Department's list of "excess currency" countries at the end of Calendar Year 1972 and Yugoslavia is expected to be removed at the end of FY 1974, no further appropriations are requested for the projects listed here under Morocco or Yugoslavia. Nevertheless, it is necessary to enumerate these projects in order to give an accurate picture of the current activities of the Institution's Special Foreign Currency Program.

MUSEUM PROGRAMS, SCIENTIFIC AND CULTURAL RESEARCH
(SPECIAL FOREIGN CURRENCY PROGRAM)

FISCAL YEARS 1973, 1974 and 1975

COMMITMENTS OF FUNDS BY COUNTRY

Country	FY 1973 Actual	FY 1974 Estimate	FY 1975 Estimate
Burma	$ 0	$ 12,000	$ 12,000
Egypt	852,000	1,387,000	1,862,000
Guinea	0	2,000	8,000
India	1,440,000	1,238,000	976,000
Morocco	183,000	0	0
Pakistan	71,000	363,000	427,000
Poland	255,000	317,000	538,000
Tunisia	524,000	699,000	677,000
Yugoslavia	392,000	482,000	0
	$3,717,000	$4,500,000	$4,500,000

COMMITMENTS OF FUNDS BY PROGRAM

Program	FY 1973 Actual	FY 1974 Estimate	FY 1975 Estimate
Archeology and Related Disciplines	$2,543,000	$2,400,000/1	$2,300,000/1
Systematic and Environmental Biology	874,000	1,400,000	1,500,000
Astrophysics and Earth Sciences	167,000	500,000	450,000
Museum Programs	91,000	190,000	240,000
Grant Administration	42,000	10,000	10,000
	$3,717,000	$4,500,000	$4,500,000

/1 Includes payment to UNESCO of $1,000,000 equivalent in excess Egyptian pounds for the international campaign to preserve the Nubian monuments.

MUSEUM PROGRAMS, SCIENTIFIC AND CULTURAL RESEARCH
(SPECIAL FOREIGN CURRENCY PROGRAM)
Fiscal Year 1975

LIST OF PROJECTS

A. ARCHEOLOGY AND RELATED DISCIPLINES

I. BURMA

a. On-going and Pending Archeology Projects in Burma

1. Institution	Title of Project
University of Hawaii, Honolulu, Hawaii	The Late Pleistocene and Early Holocene Prehistoric Culture of the Dry Zone of the Irrawaddy River Valley, Burma

This study of the material culture of the peoples who inhabited what is today Burma in the middle and new "stone age" is proposed by the same American scholar who has recently demonstrated that Southeast Asia may be a "cradle of civilization" to vie with Mesopotamia. The project is particularly important in that it would constitute a "first" in cooperation between an American university and the Ministry of Union Culture in Rangoon.

U.S. Dollar Equivalent in Burmese Kyats		
	FY 1975 est.	5,000
	FY 1974 est.	5,000
	FY 1973	---
	FY 1972	200
	FY 1971	1,000

b. New Archeology Projects in Burma

None

II. EGYPT

a. On-going and Pending Archeology Projects in Egypt

	Institution	Title of Project
2.	American Research Center in Egypt, Princeton, New Jersey	Research Activities of the American Research Center in Egypt (ARCE)

The Center, a consortium of 15 U.S. universities and museums, serves as an indispensable liaison with the Government of Egypt for all American scholars attempting to work in the country. Their research projects are carried out, directly or indirectly, under its auspices. In the absence of official diplomatic relations between Egypt and the United States, the Center continued to maintain an American cultural presence in the country, which is much appreciated especially by those Egyptians who value relations with America and the West. ARCE projects active in 1973-74 include the continuing epigraphic survey of the Egyptian monuments in Luxor by a team from the Oriental Institute, University of Chicago, excavation in the pyramid area at Giza, excavations at the Islamic site of Fustat in Old Cairo, and a study of Biblical themes in Coptic and North African art. The University of Pennsylvania's Akhnaten temple project is entering its second year under the administration of ARCE. (See the following project, number 3 , for the history of the Akhnaten research.)

U.S. Dollar Equivalent in Egyptian Pounds	
	FY 1975 est. 200,000
	FY 1973 643,000
	FY 1972 434,000
	FY 1971 189,000
	FY 1970 26,000
	FY 1969 109,000
	FY 1968 202,000
	FY 1967 177,000
	FY 1966 259,000

	Institution	Title of Project
3.	University Museum University of Pennsylvania Philadelphia, Pennsylvania	The Akhnaten Temple Project

This project has been written up in Life, the National Geographic Magazine and other magazines and newspapers. It involves the reconstruction by computer methods of the facade of a temple which was destroyed in antiquity and of which only the scattered stones remained. By coding information on individual stones, computer technology allowed photographs of the stones to be rematched so that the appearance of this famous temple is visible to human eyes for the first time since antiquity. The first of a series of monographs about this project will soon be published. The staff continues to make remarkable discoveries about the era of Akhnaten by reconstructing temple scenes and by finding archeological evidence of the form and function of the temple. Sponsorship of the data gathering phase by the University of Pennsylvania was completed in FY 1972. (See Item 2, above).

U.S. Dollar Equivalent in Egyptian Pounds	FY 1972	5,000
	FY 1971	66,000
	FY 1970	67,000
	FY 1969	60,000
	FY 1968	10,000
	FY 1967	65,000

4.	University Museum University of Pennsylvania Philadelphia, Pennsylvania	The Dra Abu El Naga Project

The study of tomb inscriptions at Dra Abu El Naga was begun over fifty years ago by American scholars working in Egypt, but was unable to be carried to completion. The intention of the University Museum is to complete the work and publish the results at long last. When it is completed, the tombs will probably be opened to tourists and other interested viewers.

U.S. Dollar Equivalent in Egyptian Pounds	FY 1975 est.	20,000
	FY 1974 est.	36,000
	FY 1972	----
	FY 1971	26,000
	FY 1970	17,000
	FY 1969	17,000
	FY 1968	10,000

Institution	Title of Project
5. Smithsonian Astrophysical Observatory, Cambridge Massachusetts	The Stellar Alignment of the Egyptian Temples at Karnak

The same astronomer who demonstrated that the massive megaliths at Stonehenge in England were erected by a prehistoric people who demonstrated a considerable and surprising knowledge of astronomy believes that the ancient Egyptians too lined up the temples they built with the sun and the stars. This view has often been put forward as a theory, but nobody has ever adequately tested it, primarily because astronomers have little knowledge of archeology and archeologists have little knowledge of astronomy. In this project an astronomer proposes to team up with an Egyptologist and try to answer the question of the heavenly orientation of the massive Egyptian temples at Karnak once and for all.

U.S. Dollar Equivalent in Egyptian Pounds	FY 1975 est.	7,000
	FY 1974 est.	7,000
	FY 1973	7,000
	FY 1972	----
	FY 1971	1,000

6. University Museum University of Pennsylvania Philadelphia, Pennsylvania	Excavation within the Town and Harbor Site of Malkata, Western Thebes

This project proposes excavation of selected areas within the palace town of King Amenhotep III (1417-1379 B.C.), and will concentrate upon the harbor of the town, showing in detail how the civilization of ancient Egypt depended upon the Nile to hold itself together. The important period involved is the New Kingdom period in ancient Egyptian history (ca. 1570-730 B.C.).

U.S. Dollar Equivalent in Egyptian Pounds	FY 1975 est.	80,000
	FY 1974 est.	78,000
	FY 1973	52,000
	FY 1972	27,000
	FY 1971	28,000

7. University of Michigan Ann Arbor, Michigan	Art and Technology of Graeco-Roman Lamps in Ancient Egypt

Although the people of Egypt are related to the Semitic peoples who live around them, the country was for centuries a center of Greek culture and was famous as the "granary" of the Roman Empire. This study will increase our knowledge of trade associations around the Mediterranean and Graeco-Roman influence on Egypt in antiquity. Thus, a major gap in our knowledge of the ancient Mediterranean civilizations can be filled by this relatively modest research project.

U.S. Dollar Equivalent in Egyptian Pounds	FY 1975 est.	2,000
	FY 1974 est.	2,000

	Institution	Title of Project
8.	Smithsonian Institution Washington, D.C.	U.S. Contribution to UNESCO's Nubian Monuments Campaign-- The Temples of Philae

The final United States contribution to the study and conservation of the archeological sites and ruins in the Nile Valley to be inundated by waters impounded by the Aswan High Dam is proposed. President Kennedy proposed in 1961 that the United States make a contribution to the salvage of the temples on the Island of Philae along with three other contributions which have already been made. In making this final contribution, the United States would join at least 18 other nations, as well as Egypt, in salvaging the most important temples of the late Pharaonic, Greek, Roman and early Christian periods in Egypt. (See page B-3 of the Smithsonian Budget Justifications for the Fiscal Year 1975).

U.S. Dollar Equivalent in Egyptian Pounds	FY 1975 est.	1,000,000
	FY 1974	1,000,000

9.	Southern Methodist University, Dallas, Texas	The Prehistory of Central Egypt

Egypt today is largely desert yet in antiquity it offered man wide areas in which to thrive and create an early and highly advanced social system. Through a study of the geology and prehistoric archaeological remains of the Egyptian desert, this project has established a chronology of environmental changes and the appearance and development of early man.

U.S. Dollar Equivalent in Egyptian Pounds	FY 1975 est.	36,000
	FY 1974	39,000
	FY 1973	29,000
	FY 1969	40,000
	FY 1968	33,000

	Institution	Title of Project
10.	University of Kentucky, Lexington, Kentucky	Archaeological Excavation at Qasr Ibrim, Egyptian Nubia

Much of the site of Qasr Ibrim has been inundated by waters of the lake formed by building the Aswan Dam across the Nile River, but the fortress area stands above the waters on a rocky promontory. Here were located major religious centers from as early as 1600 B.C. and provincial capitals at various periods throughout the next three thousand years. Excavation within the fortress walls has revealed that Qasr Ibrim may have been the place of residence of the little known Nubian 'X-group' (Ballana) kings who reigned from about 400 A.D. to about 600 A.D., the immediate pre-Christian period in Nubia. In addition to investigating the exciting prospects of the 'X-group' royal center this project has concentrated on uncovering evidence of the way of life of the ordinary people who inhabited this site during its many centuries of occupation.

U.S. Dollar Equivalent in Egyptian Pounds	FY 1975 est.	5,000
	FY 1974 est.	4,000
	FY 1973	5,000

b. New Archeology Projects in Egypt

Institution	Title of Project
11. American Research Center in Egypt, Princeton, New Jersey (A Consortium of 15 United States research institutions)	Excavations of the Ancient City of Memphis, Egypt

The impact of successive Greek and Roman conquerors on the daily lives of the native people of the Pharaonic City of Memphis is the subject of this study.

U.S. Dollar Equivalent in Egyptian Pounds FY 1975 est. 20.000

12. American Research Center in Egypt, Princeton, New Jersey (Institute for Antiquity and Christianity, Claremont, California)	Editing the Nag Hammadi Codices

In 1945-46 peasants unearthed near Nag Hammadi, Egypt, thirteen papyrus manuscripts which contain approximately fifty-three essays pertaining to the Gnostic religious movement in the first centuries after Christ. Contents of the manuscripts, when made available to scholars, will provide important additions to our knowledge of the development and climate of early Christianity. Funds are being requested to complete the Institute for Antiquity and Christianity's well-advanced project of reassembling the manuscripts from fragments and photographs and publishing complete facsimiles as well as an English translation.

U.S. Dollar Equivalent in Egyptian Pounds FY 1975 est. 42,000

13. American Research Center in Egypt, Princeton, New Jersey	Support for Research Fellowships of American Students working in Egypt

Research projects of American graduate students (Ph.D. candidates) include a study of the god Bes and his place in the culture of ancient Egypt and a study of tomb relief sculpture in the seventh century B.C.

U.S. Dollar Equivalent in Egyptian Pounds FY 1975 est. 30,000

	Institution	Title of Project
14.	University of California Los Angeles, California	Radio Carbon Dating of Pre-Dynastic Period Collections in Egypt

Recent refinements in Carbon-14 dating techniques have made it possible to pinpoint the dates of material recovered from archeological excavations much more precisely than is possible using contextual evidence. Application of Carbon-14 analysis to materials of the pre-dynastic period (prior to 3,000 B.C.) is of particular importance since supporting data is scarce for the years prior to foundation of Egypt's highly organized governmental systems. The project is intended to date as nearly as possible the pre-dynastic materials in Egyptian museums in order to improve the validity of collections for both scholarly study and museum education.

U.S. Dollar Equivalent in Egyptian Pounds FY 1975 est. 30,000

III. GUINEA

a. No On-going, Pending, or New Projects in Archeology

IV. INDIA

a. On-going and Pending Archeology Projects in India

Institution	Title of Project
15. American Institute of Indian Studies, Chicago Illinois (A consortium of 26 universities and colleges)	Support for the Center for Art and Archeology at Benares

Of the major eastern civilizations of the world, India's is the least known in the West. The Center aims to document and photograph key parts of India's vast art treasures in an effort to determine simply what is there. The results of this inventory are of great benefit and interest to the American scholars and institutions attempting to study the unique civilization of one of the most important countries in the world today. Hard dollar support to supplement the rupees being provided by the Smithsonian comes from the JDR III Fund.

U.S. Dollar Equivalent in Indian Rupees	
	FY 1975 est. 100,000
	FY 1974 est. 101,000
	FY 1973 113,000
	FY 1972 ----
	FY 1971 121,000
	FY 1970 150,000
	FY 1969 139,000
	FY 1968 145,000
	FY 1967 131,000
	FY 1966 77,000

16. American Institute of Indian Studies, Chicago Illinois	Support for the AIIS Centers in India, and for Research Fellowships for American Scholars Working in India

It would be virtually impossible for any American attempting to perform research in the social sciences and humanities in India to attempt to do so without the facilities provided by the Center--they would not be able to get housing, visas, transportation, permits to work, and so on, without the support of the Center. Since the Center enjoys the highest reputation with the Government of India, the increasing number of Americans who are turning their attention to the study of this vast subcontinent are the beneficiaries of the indispensable services rendered by the Center.

U.S. Dollar Equivalent in Indian Rupees	
	FY 1975 est. 200,000
	FY 1974 est. 490,000
	FY 1973 1,134,000
	FY 1972 252,000
	FY 1971 479,000
	FY 1970 134,000
	FY 1969 148,000

Institution	Title of Project
17. University of Michigan Ann Arbor, Michigan	Photographic Documentation of Painting and Sculpture During India's Golden Age from the Fifth to Eighth Centuries, A.D.

Although Indian art commands a higher and higher price on the commercial market today, almost nothing is really known in this country about the rich Indian tradition. The University of Michigan is taking the lead in locating, photographing, and studying important works of art; other American institutions will also have access to the material documented for study pruposes.

U.S. Dollar Equivalent in Indian Rupees	FY 1975 est.	5,000
	FY 1974 est.	5,000
	FY 1971	3,500

18. University of Hawaii Honolulu, Hawaii	To initiate Excavations in Northern India in Conjunction with the Archeological Survey of India

The nature of early man's culture in Northern India is almost completely unknown and represents a considerable gap in our knowledge, especially when compared to what we know about early man in surrounding areas of South Asia such as the Indus Valley, Ceylon, Thailand. The University of Hawaii has gained considerable experience in working in Asia through its well-known East-West Center, and would be able to apply techniques and compare materials based on its existing background in Asia and the Pacific.

U.S. Dollar Equivalent in Indian Rupees	FY 1975 est.	3,000
	FY 1974 est.	7,000
	FY 1973	3,000
	FY 1971	2,500

19. Colgate University Hamilton, New York	Raksha: Documentation on Film Tape and through Anthropological Methods of India's Disappearing Traditional Performing Arts

As is true of so many facets of traditional cultures faced with rapid modernization, India's extremely rich tradition of song and dance, both of the "folk" variety and of a highly sophisticated professional type, is in danger of dying out. This project aims both to preserve and document performing art forms still exemplified by living performers and to the extent possible encourage the continuation of these forms. It has been only in the past few years that the music and dance of India have gained some popularity in America through Indian films and performances. At precisely the moment these Indian performing arts are gaining new audiences they are in danger of disappearing.

U.S. Dollar Equivalent in Indian Rupees	FY 1975 est.	60,000
	FY 1974	9,000
	FY 1973	3,000
	FY 1972	116,000

	Institution	Title of Project
20.	Yale University New Haven, Connecticut	Quarrying in the Siwalik Hills for Fossil Remains of Man's Early Primate Ancestors

South Asian fossil deposits of man's early primate ancestors have not been explored with anything like the thoroughness of the well publicized deposits in East Africa although the Indian fossils are already more numerous and promise important insights into man's evolution.

U.S. Dollar Equivalent in Indian Rupees	FY 1975	---
	FY 1974	---
	FY 1973	2,000

21.	Vassar College, Poughkeepsie, New York, and American Museum of Natural History, New York, New York	Compendium and Publication of All Indus Inscriptions in India

This project aims to compile and publish all the inscriptions from the ancient civilization of the Indus Valley. The script used by this civilization has never been deciphered. As was true with hieroglyphics, cuneiform, and other ancient writing systems, a compendium of existing inscriptions is necessary to enable scholars to proceed with the work of deciphering the script.

U.S. Dollar Equivalent in Indian Rupees	FY 1975 est.	20,000
	FY 1974	20,000
	FY 1973	---
	FY 1972	33,000

22.	Association for Asian Studies, Ann Arbor, Michigan	Linguistic Research In India

The modern science of linguistics in America has led the world in the variety and sophistication of its techniques. The study of man's culture through his language can nowhere be more fruitfully studied than through analysis of man's languages. Techniques which are commonplace in this hemisphere, however, have yet to be widely applied in South Asia where it is proposed that this study be conducted.

U.S. Dollar Equivalent in Indian Rupees	FY 1975 est.	18,000
	FY 1974 est.	18,000

	Institution	Title of Project
23.	American Institute of Indian Studies, Chicago Illinois	Documentation of Ritual Art Forms as Communication Systems of Traditional Cultures

This project involves the documentation on film and tape, as well as the translation of pertinent Sanscrit dramas, related to the traditional ritual art forms of India. It has long been recognized how important has been the role of these ritual art forms in the culture of India. Modern methods of study will not only yield important data relative to change and development in India but will serve to preserve these forms as one of the important human cultural expressions.

U.S. Dollar Equivalent in Indian Rupees	FY 1975 est.	30,000
	FY 1974 est.	30,000
	FY 1973	33,000

24.	Yale University New Haven, Connecticut	Analysis of Museum Collections of the Fossil Apes and Pre-Humans of India

No complete analysis of the two most important collections of fossil apes and pre-humans of India has ever been undertaken. Collections at Yale and at the Geological Survey of India will be systematically studied for their importance to understanding man's evolution and fiber glass and plaster casts of significant fossils will be exchanged.

U.S. Dollar Equivalent in Indian Rupees	FY 1975 est.	20,000
	FY 1974 est.	10,000
	FY 1973	3,000

25.	National Museum of Natural History, Smithsonian Institution	Study and Collection of Ethnographic Materials Characteristic of Present-day Life in Bhutan

The remote, Himalayan Mountain nation of Bhutan is little known in the West. It is proposed to study the daily-life of the people of this Buddhist culture, collect typical personal and household objects, and to prepare an exhibit for the Smithsonian and for other interested institutions in the United States portraying the life of the people in this oriental Kingdom which is rich in fine arts and ancient crafts.

U.S. Dollar Equivalent in Indian Rupees	FY 1975	---
	FY 1974	---
	FY 1973	8,000

	Institution	Title of Project
26.	Smithsonian Institution Libraries, Washington, D. C.	Smithsonian - National Science Foundation Translations Program

The National Science Foundation, under its special foreign currency translations program, provides translations services on scientific subjects for various federal agencies, apportioning its own budget for this purpose. Under an inter-agency agreement, the Smithsonian transfers additional funds from its own Special Foreign Currency Program to the NSF to support additional translations urgently needed to support Smithsonian scientific programs.

U.S. Dollar Equivalent in Indian Rupees	FY 1975	---
	FY 1974	17,000

b. New Archeology Projects in India

	Institution	Title of Project
27.	University of Texas Austin, Texas	A Multi-National Study of Ancient Indic and Indo-European Languages and Cultures

Many languages, ancient and modern, of Asia and Europe have grown out of an ancient Indic language. This common origin of today's group of Indo-European languages still lies shrouded in the mists of pre-historic time. This study, which would draw together scholars of all nations specializing in the study of Indo-European languages and cultures, proposes to shed light on this major phase of the development of language.

U.S. Dollar Equivalent in Indian Rupees FY 1975 est. 30,000

28. University of Michigan
Ann Arbor, Michigan — Genetic Effects of Inbreeding on Indian Children

Intermarriage within near degrees of consanguinity has long been known to have marked effects upon the genetic inheritance of the children of such unions. In many cases, the children are born with genetic defects. This project thus represents a dimension of Anthropology which could have important implications for human health. The Principal Investigators conducted a classic genetic study at Hiroshima. The marriage habits of the particular subgroup they wish to study in India constitute almost an ideal control group for this study.

U.S. Dollar Equivalent in Indian Rupees FY 1975est. $3,000

V. MOROCCO

a. On-going and Pending Archeology Projects in Morocco

	Institution	Title of Project
29.	New York University New York City, New York	Ksar es-Seghir: An Investigation on Islamic Archeology and History

The Medieval Islamic port-fortress of Ksar es-Seghir on the Moroccan shore of the Straits of Gibraltar will provide an understanding of the social and economic history of the settlements of Muslim western North African and Spain during the 10th to the 16th Century A.D., a period almost totally unknown archeologically especially in Morocco. The site will also serve to test effective methods of archeological investigation of large urban settlements.

U.S. Dollars Equivalent in Moroccan Dirhams FY 1973 162,000

b. New Archeology Projects in Morocco

None

VI. PAKISTAN

a. On-going and Pending Archeology Projects in Pakistan

	Institution	Title of Project
30.	National Museum of Natural History Smithsonian Institution Washington, D.C.	Disappearing Ancient Technologies of Pakistan

With the spread of industrialization around the world, crafts and techniques which have been carried on for millenia are in the process of disappearing in our lifetime. The aim of this project is to document and salvage what can be saved of these crafts and techniques as well as the materials used, many of which can find uses even in the modern world. It is expected that a small scale crafts industry can be maintained as a result of this study which will not only provide saleable hand-made objects to tourists but will help Pakistan's difficult foreign exchange and employment situations by providing a saleable craft product.

U.S. Dollar Equivalent in Pakistani Rupees	FY 1975 est.	32,000
	FY 1974	60,000
	FY 1972	14,000
	FY 1971	52,000
	FY 1970	76,000
	FY 1969	44,000
	FY 1968	25,000
	FY 1967	7,000

31.	Office of the Assistant Secretary for Museum Programs and Conservation Laboratory, Smithsonian Institution, Washington, D.C.	Study and Application of Techniques for the Conservation of the Indus Valley Civilization City of Moenjodaro

The Indus River valley has a civilization at least as old as the Nile or the Tigris and Euphrates River Valleys. One of its few great city excavations, Moenjodaro, is threatened with complete destruction because the water table is higher today than at the time the city flourished. As a consequence, moisture, carrying with it corrosive salts, penetrates the ancient bricks causing the walls to crumble. It is proposed to marshall American conservation talent to seek ways to prevent the deterioration of what remains of this ancient city.

U.S. Dollars Equivalent in Pakistani Rupees	FY 1975 est.	20,000
	FY 1974 est.	3,000
	FY 1973	2,000

Institution	Title of Project
32. National Museum of Natural History, Smithsonian Institution, Washington, D.C.	Salvage Archeological Study of Indus Valley Settlements to be Inundated by the waters, Impounded by the Tarbela Dam

It is proposed to assist the Archeological survey of Pakistan in the urgent study of settlements in the valley above the Tarbela Dam which is under construction on the Indus River. This area is a critical one to study in seeking an understanding of the migrations of Aryan peoples which underlies much of the early history of both East and West.

U.S. Dollar Equivalent in Pakistani Rupees FY 1974 8,000

33. University of California Berkeley, California	Excavation of the Prehistoric Harappan Seaport site of Balakot in Pakistan

Our knowledge of the world before languages were written rests on archeological excavations which unearth objects commonly used in ancient settlements. The extent of communication and trade between different cultures can be understood on the basis of discovery of pottery not characteristic of local production but of distant civilizations. The sea links between the civilizations of the Persian Gulf, including Mesopotamia, and those of the Indus River Valley are believed to have been extensive but they are not documented. These excavations propose to determine the extent of this communication by sea.

U.S. Dollar Equivalent in Pakistani Rupees FY 1975 est. 20,000
FY 1974 55,000

34. Vassar College Poughkeepsie, and the American Museum of Natural History, New York, New York	Archeological Investigation of the Harappan Site of Allahdino

Our modern Indo-European languages have a common ancestor, it is believed, in the Indic language of peoples who migrated through and inhabited the Middle East, and Central and South Asia. An archeological excavation of the region of north west Pakistan through which these peoples are believed to have passed in Prehistoric times is underway to test our current conceptions of these Indic language speaking peoples.

U.S. Dollar Equivalent in Pakistani Rupees FY 1975 est. 50,000
FY 1974 est. 44,000
FY 1973 28,000

	Institution	Title of Project
35.	National Museum of Natural History, Smithsonian Institution, Washington, D.C.	Survey of Islamic Archeological Sites in Pakistan

The history of Islamic civilization has been neglected in the West until recent years. The vital role of these petroleum producing lands in the life of the industrialized nations and the rising national consciousness of Islamic peoples has focussed attention on this field. Although considerable attention has been paid by archeologists to the ancient civilizations of the Indus River valley, the early centers of Islamic culture in that area have been relatively neglected. A survey of potentially important sites is a necessary prelude to further investigations.

U.S. Dollar Equivalent in Pakistani Rupees	FY 1975 est.	9,000
	FY 1974	17,000
	FY 1973	12,000

36.	University of Pennsylvania Philadelphia, Pennsylvania	Population and Culture on the Iranian Plateau (Pakistan)

The desert areas of the Iranian Plateau, which today straddles the national boundaries of Pakistan, Afghanistan and Iran, have historically functioned as a refuge for people. Migration into these areas has been determined by the balance between population and resources in the regions surrounding them, and the culture of the peoples has been dominated by that of the communities surrounding them. There has been little change. Data gathered by this inter-disciplinary study would increase understanding of the inter-action of demographic with social and cultural processes.

U.S. Dollar Equivalent in Pakistani Rupees	FY 1975 est.	20,000
	FY 1974	2,000

	Institution	Title of Project
37.	Yale University New Haven, Connecticut	Search for and Excavation of Quarriable Localities in the Siwaliks, Pakistan

Geological strata formed some 10 to 30 million years ago are exposed in the Siwalik hills in South Asia, in the Faiyum region in Egypt and in the Rift Valley in East Africa. Studies in each area are producing fossil mammals from the time of man's earliest development and, in some cases, fossils of man's primate ancestors. Fossil mammals have been known from the Siwalik range in Pakistan and India for more than a century, but earlier mammal finds consisted mainly of larger specimens because techniques were restricted to surface collecting for India. Only a previous Yale expedition succeeded in recovering fossils of small mammals by employing intensive quarrying, washing and screening techniques. The proposed project seeks to recover similar microfauna and micromammals in Pakistan in the vital search for a better understanding of man's evolution.

U.S. Dollar Equivalent in Pakistani Rupees FY 1974 5,000

38.	Smithsonian Institution Libraries, Washington, D.C.	Smithsonian - National Science Foundation Translations Program

The National Science Foundation, under its special foreign currency translations program, provides translations services on scientific subjects for various federal agencies, apportioning its own budget for this purpose. Under an inter-agency agreement, the Smithsonian transfers additional funds from its own Special Foreign Currency Program to the NSF to support additional translations urgently needed to support Smithsonian scientific programs.

U.S. Dollar Equivalent in Pakistani Rupees FY 1974 17,000

b. New Archeology Projects in Pakistan

	Institution	Title of Project
39.	National Museum of Natural History, Smithsonian Institution, Washington, D.C.	The History of the Kushan and Pre-Kushan Peoples of Central Asia, 500 B.C. to 200 A.D.

The Kushan people unified all Asia between the frontiers of the Roman and Chinese empires from about 200 B.C. to 200 A.D. They provided political stability, and trade and culture flourished as a consequence. One center of this culture lay in the area of present-day Pakistan. This project proposes to write the history of this neglected segment of human affairs.

U.S. Dollar equivalent in Pakistani Rupees FY 75 est. 8,000

VII. POLAND

a. On-going and Pending Archeology Projects in Poland

Institution	Title of Project
40. State University of New York, Buffalo, New York (Formerly a University of Michigan project)	The Earliest Neolithic Settlements in Poland

Much of what is known about early man has been uncovered on the continent of Europe, but the opportunities of American scholars to participate in this work has been limited by the extra funds required to work abroad and limited access to the best site. This is the only American excavation which has been allowed in Poland in recent years. It has provided unusual cultural links between Polish and American scholars which have been difficult to establish and maintain during the era of the Cold War. The Polish-American collaboration on this project has proved so successful that a new series of excavations at Neolithic settlements in Poland is being initiated by the team in order to expand knowledge of the prehistoric environment and inhabitation of the area which today is Poland.

U.S. Dollar Equivalent in Polish Zlotys	
	FY 1975 est. 70,000
	FY 1974 est. 86,000
	FY 1973 58,000
	FY 1972 56,000
	FY 1971 44,000
	FY 1969 37,000
	FY 1968 36,000
	FY 1967 22,000

b. New Archeology Projects in Poland

	Institution	Title of Project
41.	University of Missouri, Columbia, Missouri	Study of Polish Early Medieval Archeology

Poland contains many monuments and settlements dating from the early middle ages, some of which are intact and have been in continual use but others of which are accessible only to the skilled archeologist. Polish archeologists have developed highly advanced techniques for use in their study of the early medieval settlement sites and in interpreting materials recovered from those excavations. The University of Missouri proposes to send one of its most outstanding post-doctoral research scholars whose specialization is archeology of the early medieval period in Europe, to work with archeologists at the Polish Institute for Material Culture to participate in excavations currently under way and to study material from current and earlier excavations.

U.S. Dollar Equivalent in Polish Zlotys FY 1975 est. 15,000

42.	Southern Methodist University, Dallas, Texas	Recent Developments in Techniques of Analysis of Old Stone Age Artifacts.

Computers serve the prehistoric archeologist in identifying the types of stone tools, which are the principle relic of these ancient societies, and in analyzing the distribution of the tools of different kinds in prehistoric settlements to show what the pattern of family and community life was. Collaboration with the Institute for the History of Material Culture of the Polish Academy of Sciences is proposed.

U.S. Dollar Equivalent in Polish Zlotys FY 1975 10,000

VIII. TUNISIA

a. On-going and Pending Archeology Projects in Tunisia

	Institution	Title of Project
43.	Dumbarton Oaks Center for Byzantine Studies Washington, D.C. and University of Iowa, Iowa City, Iowa	A Corpus of the Ancient Mosaics of Tunisia

The Tunisian mosaics are among the most distinctive of the mosaics which the ancient romans left. Some unique ones of the Christian period remain in Tunisia. These priceless treasures are being exposed one by one because of rapid urban development and unless taken up, and transported to safety in a museum, or preserved in some other fashion, they will be lost to humanity. The "corpus" of Tunisian mosaics being prepared by this project includes a complete, detailed description of each mosaic unearthed; all this data will henceforth be available generally in university and museum libraries.

U.S. Dollar Equivalent in Tunisian Dinars	FY 1975 est.	80,000
	FY 1974 est.	81,000
	FY 1973	80,000
	FY 1972	84,000
	FY 1971	58,000
	FY 1970	59,000
	FY 1969	29,000

44.	New York University New York, New York	Modernization in Rural Tunisia

This is a joint project in which an experienced American investigator will team up with an experienced Tunisian investigator to examine the social and cultural changes which are coming about in rapidly developing Tunisia, and the implications of these social and cultural changes for further development. The study will focus on two communities in the Mejerda Valley of Central Tunisia which have been traditionally rich agricultural centers but which are now faced with the crisis of adjustment to modern ways and to a modern agricultural marketing system.

U.S. Dollar Equivalent in Tunisian Dinars	FY 1974 est.	4,000
	FY 1973	51,000

b. New Archeology Projects in Tunisia

None

IX. YUGOSLAVIA

a. On-going and Pending Archeology Projects in Yugoslavia

45. Institution: University of Minnesota, Minneapolis, Minnesota

Title of Project: Excavations at the Palace of the Roman Emperor Diocletian at Split, Yugoslavia

After the Barbarian invasions overran the Roman Empire, the huge palace of the Roman Emperor Diocletian at what is today Split was abandoned, and an entire medieval city later grew up within the palace walls. This excavation represents a unique opportunity to learn more about Roman times since it is being conducted in conjunction with the urban renewal program of the modern Yugoslav City of Split.

U.S. Dollar Equivalent in Yugoslav Dinars

FY 1974 est.	59,000
FY 1973	46,000
FY 1972	78,000
FY 1971	13,000
FY 1970	60,000
FY 1969	78,000
FY 1968	33,000

46. University of Texas, Austin, Texas

Archeological Excavations at Stobi

Macedonia was a crossroads in ancient times and the excavation of this classical site will provide us with considerable knowledge about the interaction in antiquity between East and West.

U.S. Dollar Equivalent in Yugoslav Dinars

FY 1974 est.	81,000
FY 1973	69,000
FY 1972	76,000
FY 1970	40,000

b. New Archeology Projects in Yugoslavia

None

B. SYSTEMATIC AND ENVIRONMENTAL BIOLOGY

I. BURMA

a. On-going and Pending Biology Projects in Burma

	Institution	Title of Project
47.	Missouri Botanical Garden St. Louis, Missouri	Collection and Classification of Burmese Mosses

The Missouri Botanical Garden and Rangoon University proposes to collect the Mosses of Burma to fill an important gap in the collections in St. Louis which are the best for Systematic Studies of the Moss flora of the world.

U.S. Dollar Equivalent in Burmese Kyats — FY 1975 est. 5,000
FY 1974 est. 5,000

48.	University of California at Davis	Survey of Endangered Species.

No modern scientific survey of the animals of Burma which are threatened with extinction has ever been made. Because human population pressures constantly reduce the natural habitat of wild life, current surveys are essential to develop sanctuaries to prevent extinction of important animals. This project would be undertaken together with the International Union for the Conservation of Nature and Natural Resources.

U.S. Dollar Equivalent in Burmese Kyats — FY 1975 est. 2,000
FY 1974 est. 2,000

b. New Biology Projects in Burma

None

II. EGYPT

a. On-going and Pending Biology Projects in Egypt

	Institution	Title of Project
49.	National Museum of Natural History, Smithsonian Institution, Washington, D.C.	A Serological and Ectoparasite Survey of the Migratory Birds of East Africa

Based in Egypt, this project traps representative birds migrating through Northeastern Africa, collects blood and ectoparasite samples, and then bands the birds before releasing them (reports on the capture of banded birds from other places in Europe will yield significant information about the migration patterns of the birds.) Information about the migratory patterns of the birds, plus an analysis of the blood samples and the parasites collected from the birds, has already provided significant information about the role of migrating birds in spreading diseases which can attack crops, animals, and man. The Rockefeller Virus Laboratories are collaborating with the Smithsonian on this project.

U.S. Dollar Equivalent in Egyptian Pounds	FY 1973	31,000
	FY 1972	25,000
	FY 1971	44,000
	FY 1970	25,000
	FY 1969	34,000
	FY 1967	25,000

50.	Union College, Schenectady, New York	Plankton Communities of the Nile River Delta

Assessing the impact of man's engineering undertakings upon the total environment is an urgent area for study. It is becoming clear that engineering studies alone cannot provide adequate information to governments for decisions about what will, in fact, increase the well being of the human population. Reduction of the flow of nutrients into the Mediterranean because they are trapped behind the Aswan Dam has all but eliminated the shrimp fisheries of the Nile Delta. This study proposes to monitor the changes in the coast line and in the amount of salt in previously-fished freshwater lakes in the delta resulting from the change in the Nile's flow.

U.S. Dollar Equivalent in Egyptian Pounds	FY 1975 est.	80,000
	FY 1974 est.	34,000

	Institution	Title of Project
51.	University of Michigan, Ann Arbor, Michigan	Systematic Studies of the Mollusk Genus Bulinus in Africa and Adjacent Regions

This project is a "systematic" study of one common genus of African snail, especially abundant in Egypt. As disease carriers, snails are animals whose biology and habits it is particularly important to understand. These studies will be coordinated with similar studies done by the University of Michigan's Museum of Zoology in other areas of the world such as India (see Item # 57 below). A biologist at the University of Cairo will directly collaborate with his Michigan colleagues on this study.

U.S. Dollar Equivalent in Egyptian Pounds	FY 1975 est.	45,000
	FY 1974 est.	7,000
	FY 1973	31,000

52.	Southern Methodist University, Dallas, Texas	Egyptian Geology and Paleontology

The initial phase of this project enabled American paleontologists to participate in a symposium on Egyptian geology and paleontology sponsored by the Geological Survey of Egypt. This symposium brought together knowledge and expertise which will now be published for the first time in the form of proceedings. Still another result of contacts made by Southern Methodist University is a project planned with the Geological Survey for excavating pliocene deposits of the common ancestor of all contemporary African rodents.

U.S. Dollar Equivalent in Egyptian Pounds	FY 1975 est.	33,000
	FY 1974 est.	7,000
	FY 1973	1,000
	FY 1972	16,000

53.	Smithsonian Institution, Washington, D.C.	Legal Controls on Environmental Degradation

World-wide concern about the environment has motivated many scientific studies. Such scientific studies are represented among the projects for which "excess currencies" are being sought by the Smithsonian. The present project aims to focus on another aspect of the environmental crisis: the way in which laws can contribute to environmental degradation; and, conversely, the way in which laws can help contribute to positive solutions to environmental problems. Scientists, lawyers, and educators would be asked to contribute to this symposium on environmental law.

U.S. Dollar Equivalent in Egyptian Pounds	FY 1975 est.	50,000
	FY 1974 est.	2,000

	Institution	Title of Project
54.	National Museum of Natural History, Smithsonian Institution, Washington, D.C.	Publication of Two Memoirs by Societe Entomologique d'Egypte

The grant provides funds for publication of two posthumous manuscripts. The first manuscript by A. Alfieri entitled "The Coleoptera of Egypt" provides a systematic list of the fauna, its distribution throughout the country, monthly occurrence, ecological information and taxonomic notes. The second manuscript by H. C. Efflatoun Bey entitled "A Monograph of Egyptian Diptera, Part VII: Family Bombyliidae, Section II-Subfamily Bombyliidae Tomophthalmae" is a classical systematic monograph with keys to species. It provides detailed description of the species and numerous diagnostic illustrations.

U.S. Dollar Equivalent in Egyptian Pounds	FY 1974 est.	3,000
	FY 1973	10,000

b. New Biology Projects in Egypt

None

III. GUINEA

a. On-going and Pending Biology Projects in Guinea

Institution	Title of Project
55. Chico State College Chico, California	Systematic Studies of Ants and Parasites Associated with Man

Eighty percent of the animals on earth are insects. Two of the most important groups of these from the point of view of their affect on mankind are ants and termites. If we are to understand how to reduce the damage brought about by these insects, we have to know their precise nature and their role in the economies of other animals. This particular study proposes the collection of ants and termites in Guinea and particularly of the beetles (Staphylinidae) associated with them. This study is an extension of others by the same investigators covering the tropics in both this hemisphere and in Africa and Asia.

U.S. Dollar Equivalent in Guinean Francs	FY 1975 est.	8,000
	FY 1974	2,000

b. New Biology Projects in Guinea

None

IV. INDIA

a. On-going and Pending Biology Projects in India

	Institution	Title of Project
56.	National Museum of Natural History, Smithsonian Institution, Washington, D.C.	Indian Migratory Bird Project.

This project aims to continue the study of the patterns of migration of birds of South Asia as well as their possible role in the spread of diseases harmful to animals, crops and man (a continuation of World Health Organization studies) and to employ the information obtained in the preparation of a Handbook of Indian Birds. The handbook and the studies of migration and of possible disease transfer are essential elements in understanding the basic ecology of India where man and a wide variety of animals live in closer interrelation than anywhere else on earth.

U.S. Dollar Equivalent in Indian Rupees	
	FY 1975 est. 25,000
	FY 1974 est. 30,000
	FY 1973 10,000
	FY 1972 25,000
	FY 1971 35,000
	FY 1970 18,000
	FY 1969 3,000

57.	University of Michigan Ann Arbor, Michigan	Cytological Studies of Indian Mollusks.

Studies are continuing in attempts to understand better and thus control snails (mollusks), animals known to carry diseases which attack man and his domesticated animals. The diseases include schistosomiasis, liver fluke and other worm parasites. These diseases are wide spread in the tropics and they have a way of spreading dramatically in an area where hydroelectric dams and irrigation canals are being built, disturbing the ecological balance. These studies employ the most modern techniques to understand the basic genetic materials of the cells of snails and thus to make it possible to tell one family of snails from another when they are from all outward appearances identical. These earlier studies are now to be continued in India, with the same team of scientists also planning to continue this work elsewhere, notably in Egypt (see item 51 , above).

U.S. Dollar Equivalent in Indian Rupees	
	FY 1975 est. 12,000
	FY 1974 25,000
	FY 1973 5,000
	FY 1972 ----
	FY 1971 25,000
	FY 1970 26,000
	FY 1969 25,000

Institution	Title of Project
58. Office of Environmental Sciences, Smithsonian Institution, Washington, D.C.	Productivity of Tropical Lakes in South India.

This study of the way things grow in freshwater in the tropics is one of the many studies essential to an understanding of the ways man can prevent the pollution of productive bodies of water and develop them as a source of high protein food.

U.S. Dollar Equivalent in India Rupees	FY 1975 est.	10,000
	FY 1974 est.	10,000
	FY 1973	51,000

59. Yale University New Haven, Connecticut	Habitat Relationships and Distribution of Wild Ungulates in the Gir Forest of India.

Study of the wilderness has a critical role to play in developing long-range guidelines for management of natural resources. By comparing studies of lands cultivated by man with those left to grow naturally, it is possible to learn what the land is capable of producing as opposed to what man asks the land to produce. Plans for the conservation of wilderness grow out of studies like those in the Gir Forest. This study of wild ungulates (hooved animals) in the Gir Forest is now completed, but Yale University plans to undertake studies concerned with other aspects of this important wildlife area in India.

U.S. Dollar Equivalent in Indian Rupees	FY 1975 est.	10,000
	FY 1974	1,000
	FY 1973	8,000
	FY 1972	30,000
	FY 1971	26,000
	FY 1970	35,000

60. National Museum of Natural History, Smithsonian Institution, Washington, D.C.	A Flora of the Hassan District, Mysore State, Ghat Mountains Southwest India.

Underlying all environmental studies on land must be thorough studies to identify accurately each form of plant life and the place of each form in the community of living things, the ecosystem, of which it is a part. This study in India is one such carefully controlled study of a limited area with a wide range of plant life resulting from rainfall which varies from less than 30 inches to somewhere between 100 and 300 inches per year. It is providing correctly identified specimens for the National Herbarium at the Smithsonian strenghening these collections with materials from the Eastern Hemisphere. This study will be completed during FY 1974. United States scientists, outstanding in the study of the tropics of our own hemisphere, are now undertaking comparative studies in other tropics, the essential next step in understanding the biology of this climatic zone.

U.S. Dollar Equivalent in Indian Rupees	FY 1974 est.	2,000
	FY 1972	11,500
	FY 1971	26,000

Institution	Title of Project
61. National Museum of Natural History, Smithsonian Institution, Washington, D.C.	Systematic and Behavioral Studies of Flatfishes and Gobioid Fishes.

Fish to be studied under this project are similar to the sole and the flounder which are common in American diets. The knowledge of the nature, behavior and distribution of these fish in Indian waters will contribute to commercial fisheries there as well as to an understanding of the evolution of marine animals into semi-aquatic animals or those adapting to life on land.

U.S. Dollar Equivalent in Indian Rupees	FY 1975 est.	5,000
	FY 1974 est.	4,000

62. University of Georgia Athens, Georgia	Organic Productivity & Nutrient Cycling in Tropical Ecosystems.

Management of the landscape depends on an understanding of nature's process of growing plants and the circulation of plant food by this process. Research in Europe and North America has provided much information about these processes in temperate climatic regions, but little is know about these processes in tropical regions. This project proposes the study of forest, grassland and cultivated land by techniques tested in the Western Hemisphere by scholars from one of the United States' pioneering ecological research institutions.

U.S. Dollar Equivalent in Indian Rupees	FY 1975 est.	30,000
	FY 1974 est.	2,000

63. Utah State University Logan, Utah	Comparative Studies in Arid Climates.

Large areas of Southwestern United States are desert. The study and management of this landscape can be expected to provide specific data to improve the well-being of Americans of that area. Full understanding of the relationships of the plants and animals of this area and of the cycling of nutrients through such an ecosystem requires comparative studies in roughly similar regions elsewhere. The desert areas of India provide excellent comparative study areas. They can be expected also to provide vital data to the Indian Government where the expansion of deserts and the consequent loss of productive land is going forward at an alarming pace.

U.S. Dollar Equivalent in Indian Rupees	FY 1975 est.	5,000
	FY 1974 est.	3,000

	Institution	Title of Project
64.	Texas A & M University College Station, Texas	Ecology of Indian Ungulates in the Wildlife Sanctuaries of Rajasthan.

The University of Texas has intensively studied the biology of hooved animals (ungulates) from different parts of the world to develop commercial herds for man's food. This study proposes the study of the biology of several kinds of hooved mammals namely the blackbuck, the nilgai antelope and the chital which are currently being raised in Texas with varying degrees of success. The studies of these animals on their native ranges is expected to yield information to guide their better management in the United States.

U.S. Dollar Equivalent in Indian Rupees	FY 1975 est.	5,000
	FY 1971	2,000

65.	University of California Davis, California	Ecology and Behavior of Hoolock Gibbons.

The gibbon is unique among man-like apes in that he mates for life. He also has a strict, one-family territorial social organization. It now seems possible that this animal can change his social organization when the necessities of life require it. Specifically, when the trees lose their leaves and cease to provide food, it is believed that the gibbon will form larger groups made up of several families in order to forage for food. If this belief can be verified, one of the missing links in the development of social organization from man's early primate ancestors to man's own communities of families will have been supplied.

U.S. Dollar Equivalent in Indian Rupees	FY 1975	5,000
	FY 1974 est.	5,000
	FY 1973	
	FY 1972	----
	FY 1971	7,000

66.	Utah State University Logan, Utah	Ecology and Behavior of the One-Horned Rhinocerous, an Endangered Species

This study of the ecology of the Kaziranga Wildlife Sanctuary along the Bhramaputra River will provide urgently needed data to ensure the conservation of the one horned rinocerous and the wilderness essential for his survival as well as to guide the Government of Assam in management of similar lands in north-eastern India.

U.S. Dollar Equivalent in Indian Rupees	FY 1973	1,000
	FY 1971	4,000

Institution	Title of Project
67. Harvard University, Cambridge, Massachusetts and the National Museum of Natural History, Smithsonian Institution, Washington, D.C.	Ecological and Behavioral Studies of Rhesus Monkeys and Langurs

These proposed studies will examine two problems of special interest to man's understanding of his own world. The rhesus monkey is the principal animal employed in medical research in the United States. They are cropped for this purpose in India. The study of this monkey will compare their condition in two neighboring states one in which they are being captured constantly for medical research and the other where this has never happened. The outcome should include valuable information on the management of the animal to ensure needed supplies for research. The langur inhabits the same areas that the rhesus monkeys do and their study together is an essential part of the ecology of these animals. The langur studies will focus on behavior, particularly on infanticide which has been observed periodically. Population and other forms of ecological pressure will be studied in seeking an explanation for this behavior.

U.S. Dollar Equivalent in Indian Rupees	FY 1975 est.	5,000
	FY 1974 est.	5,000
	FY 1973	2,000
	FY 1972	----
	FY 1971	2,500

68. Office of Environmental Sciences, Smithsonian Institution, Washington, D.C.	A Cooperative Program of Environmental Assessment

As a result of a joint Indo-American Ecology Symposium held in New Delhi in February, 1971, plans were laid for a major program of "environmental assessment". These studies will be carried out in India jointly by Indian and American scientists and institutions. They will be concerned with the biological productivity of typical and atypical cultivated and wild ecosystems. The basic scientific data developed by this program will not only contribute to the solution of environmental problems in developing India but will add vital data on the environment of use to American scientists and institutions working on U.S. environmental problems. Budget requests in future years will include descriptions of concrete projects as they emerge under this developing program.

U.S. Dollar Equivalent in Indian Rupees	FY 1975 est.	46,000
	FY 1974 est.	5,000
	FY 1971	30,000

Institution	Title of Project
69. Smithsonian Tropical Research Institute, Smithsonian Institution, Washington, D.C.	Comparative Studies in Evolutionary Ecology in India

One-half of mankind lives in the tropics. An understanding of the biology of the tropics is critical to the livelihood of this population. The Smithsonian Tropical Research Institute leads in the continuous study of this climatic zone and of ways to predict the effects of man's actions on that zone. The objective is to inform the planning of industry and governments in order to reverse the process of destruction of the environment and ensure an improving environment for mankind.

U.S. Dollar Equivalent in Indian Rupees	FY 1975 est.	5,000
	FY 1974 est.	5,000
	FY 1971	3,000

70. National Museum of Natural History, Smithsonian Institution, Washington, D.C.	Systematics and Zoogeography of the Stomatopod Crustaceans of the Eastern Coasts of India

Study of the seas to improve man's use of the food available there is among the few first priority scientific problems today. This study is an outgrowth of the International Indian Ocean Expedition to which the United States made a significant national contribution. Much of the material obtained in the cruises on the U.S. Research Vessel Anton Brun has been returned to the Smithsonian where it is under study. Comparative studies of earlier collections are essential and this material is located primarily in Calcutta, India, with the Indian Zoological Survey.

U.S. Dollar Equivalent in Indian Rupees	FY 1975 est.	5,000
	FY 1974 est.	5,000
	FY 1972	4,000

71. University of Michigan Ann Arbor, Michigan	Observations and Collections of Uropeltid Snakes

The primary purpose of this project is to gather live uropeltid (rough-tailed) snakes for transport to the United States for studies which the Principal Investigator has been carrying out for the past twelve years here. Through collaboration with Indian herpetologists, observations of the locomotor, feeding, prey-catching and mate-recognition behavior of these reptiles will be conducted in their natural habitats in India.

U.S. Dollar Equivalent in Indian Rupees	FY 1975 est.	5,000
	FY 1974 est.	5,000
	FY 1972	5,000

Institution	Title of Project
72. University of Chicago Chicago, Illinois	Trophic Strategies and Resource Utilization of Ruminant and Nonruminant Ungulates in Kaziranga

The Kaziranga Wildlife Sanctuary, located in the Indian State of Assam, is known especially as the sanctuary of the endangered Indian rhino. It also supports at least nine species of wild ungulates (hooved animals), two species of livestock. This proposal in collaboration with the College of Veterinary Science, Gauhati, India, will study the populations and eating habits of these animals in relation to the land available, with the goal of preserving the wildlife while still providing adequate grazing land for livestock.

U.S. Dollar Equivalent in Indian Rupees	FY 1975 est.	9,000
	FY 1974 est.	5,000
	FY 1973	11,000

73. Office of Environmental Sciences, Smithsonian Institution, Washington, D.C.	Development of a Manual for Oceanographic Sorting Center

Understanding life in the sea and how it can better serve mankind is still dependent on first finding out what is there. This work can be greatly accelerated by coordination and standardization of collecting and distributing specimens to the world's experts on marine plant and animal life. Oceanographic sorting centers have been established around the world to speed this study. A unanimous recommendation of the first international meeting of Directors of Oceanographic Sorting Centers, sponsored by the Smithsonian in May, 1972, in Tunisia was that manuals be developed in order to ensure world-wide standards. Represented at this meeting were Directors from India, Japan, Tunisia, Mexico, Canada, Germany, the United States and UNESCO. Indian scientists, UNESCO and the Smithsonian propose to prepare and publish these manuals.

U.S. Dollar Equivalent in Indian Rupees	FY 1975 est.	7,000
	FY 1974 est.	2,000

74. Colorado State University Fort Collins, Colorado	Workshop on Ecosystem Modeling

Man's best use of grasslands is dependent on an understanding of grassland ecosystems. An expert at Colorado State has been invited to conduct research on Indian grasslands, at the conclusion of which there will be a workshop for the purpose of sharing the latest techniques that assist in determining balanced usage of grasslands.

U.S. Dollar Equivalent in Indian Rupees	FY 1974 est.	4,000

Institution	Title of Project
75. Texas Tech University Lubbock, Texas	Anatomical and Ecological Study of the Indian Whistling Duck

In the face of habitat changes caused by human encroachment, some species of wildlife are able to adapt successfully while others have become extinct. Studies conducted by Texas Tech on the life cycle of whistling ducks in this country, as compared to anatomically nearly identical ducks in India, suggest that the Indian ducks have developed the ability to adapt to a more varied environment. Discovery of the reasons why a nearly identical bird species has different abilities to adapt may suggest ways in which an endangered species can be introduced and preserved in a different environment. This proposal would be conducted in conjunction with the Bombay National History Society.

U.S. Dollar Equivalent in Indian Rupees	FY 1975 est.	5,000
	FY 1974	6,000

76. Office of Environmental Sciences, Smithsonian Institution, Washington, D.C.	Establishment of a Marine Sorting Center at Porto Novo

More information about the kinds and quantities of sea life is necessary if man is to utilize the full potential of the sea as a food resource. Marine Sorting Centers, organized to gather and share data about marine life, are in operation in a number of countries around the world. This proposal, bringing together the Smithsonian and the Department of Marine Biology at Annamalai University, would set up such a center at Porto Novo to gather data on sea life in the Bay of Bengal.

U.S. Dollar Equivalent in Indian Rupees	FY 1975 est.	5,000
	FY 1974 est.	5,000

77. University of Kansas Lawrence, Kansas	Niche Ecology of the Garden Lizard in the Gir Forest, India

The Gir Wildlife Sanctuary, located in the Indian State of Gujerat and approximately 400 square miles in size, is the home of numerous species of wildlife. Modern wildlife preservation and management are dependent on an understanding of the relationships of the wildlife to the land available. Past studies of the Gir have included research on many of the mammal and bird species present as well as the vegetation. This study by the Bombay Natural History Society and the University of Kansas will provide data on one of the more numerous species present in the Gir but about which little is currently known, the garden lizard, Calotes versicolor.

U.S. Dollar Equivalent in Indian Rupees	FY 1975 est.	16,000
	FY 1974	3,000

Institution	Title of Project
78. Office of Environmental Sciences, Smithsonian Institution, Washington, D.C.	Limnology of the Ganges River.

The Ganges is the major river system of north India, with headwaters reaching to the Himalayas in the north, and the central highlands in the south. The Ganges plain alone covers nearly a quarter of India's land area and is the home of some 135,000,000 people, all of whom are directly or indirectly dependent on the river waters for their livelihood. As with many of the major river systems around the world, water pollution is a major problem. Determining the causes and amounts of pollution will provide important data that will make possible effective pollution control programs. An important economic benefit resulting from cleaner waters would be an increase in fisheries, potentially a valuable food resource. German and American biologists would work closely with Indian scientists representing a number of Indian research institutes and universities in carrying out this project.

U.S. Dollar Equivalent in Indian Rupees	FY 1975 est.	6,000
	FY 1974 est.	2,000

79. National Museum of Natural History, Smithsonian Institution Washington, D.C.	Tropical Flora of Indian Subcontinent

The Smithsonian is studying the tripical flora of the Indian subcontinent. This requires consultation with Indian botanists and the examination of specimens stored in India's famous herbaria.

U.S. Dollar Equivalent in Indian Rupees	FY 1975 est.	10,000
	FY 1974 est.	4,000
	FY 1973	9,000

Institution	Title of Project
80. National Museum of Natural History, Smithsonian Institution, Washington, D.C. and Harvard University, Cambridge, Massachusetts	Structure and Function of Respiratory Organs of Air-Breathing Fishes.

The fundamental question of how life on earth evolved from that in the seas extracting oxygen from the water to that on land extracting oxygen from the air has long remained unanswered. This study of the respiratory organs of air-breathing fishes has already demonstrated that lung-like tissue is associated with the gills of one Indian fish species.

U.S. Dollar Equivalent in Indian Rupees	FY 1975 est.	10,000
	FY 1974 est.	7,000
	FY 1973	1,000

81. University of Colorado, Boulder, Colorado	First International Congress of Systematic & Evolutionary Biology (ICSEB).

With the University of Colorado as host, leading authorities from many foreign countries attended the International Congress of Systematic & Evolutionary Biology in August, 1973, providing for the first time a common meeting ground for botanists and zoologists interested in systematic and evolutionary biology in the belief that the communication gap between them should be narrowed. Support was provided to facilitate participation of scholars contributing to the publication resulting from the Congress.

U.S. Dollar Equivalent in Indian Rupees	FY 1974	2,000

82. National Museum of Natural History, Smithsonian Institution, Washington, D.C.	Systematic & Developmental Anatomy of the Family Orchidaceae.

Orchids constitute the largest family of flowering plants and make up 10 percent of the world's flora. Their potential value to bio-chemistry and pharmaceuticals is gaining increasing recognition. This study would contribute to a volume describing the orchids of the world for both scientific and industrial uses.

U.S. Dollar Equivalent in Indian Rupees	FY 1975 est.	3,000
	FY 1974 est.	2,000

Institution	Title of Project
83. Virginia Commonwealth University, Richmond, Virginia	Comparative Bioenergetics of the House Sparrow

Because the common house sparrow is not only abundant but is found in most places in the world, this species provides the means to make comparative studies in "bioenergetics"--a basic aspect of ecology--which is concerned with what living things take from their environment in relation to what they give back to the environment, and the balances resulting when the intake and output of all kinds of living beings in a given environment are considered together.

U.S. Dollar Equivalent in Indian Rupees — FY 1975 est. 5,000; FY 1974 est. 4,000

84. Office of Environmental Sciences, Smithsonian Institution, Washington, D.C.	Ecosystem Studies of Wildlife Sanctuaries as a Basis for Sound Wildlife Conservation Programs.

A series of studies in India's Gir Forest of the lion, ungulates (hooved animals), the vegetation and of human encroachment, have resulted in recommendations concerning the management of the sanctuary designed to ensure that the wildlife, particularly the Asiatic lion, does not become extinct. It is proposed in collaboration with India's Forest Department to undertake similar studies in other national wildlife sanctuaries to provide a sound basis for conservation programs in each sanctuary.

U.S. Dollar Equivalent in Indian Rupees — FY 1975 est. 8,000; FY 1974 est. 4,000

85. National Museum of Natural History, Smithsonian Institution, Washington, D.C.	Geological Oceanography in the Gulf of Cambay

As the population of the world continues to increase, more attention is being focused on the sea as a source of food. The Gulf of Cambay and the adjacent continental shelf, lying off the west coast of India, are subject to large deposits of river sediment during the monsoon season. The amount of sediment and where and at what rate it settles affects marine life. This study of sediment distribution during periods of heavy flooding, and the effects on marine life, particularly commercially valuable fishes, can have application for the United States where the east coast continental shelf has features similar to those of the continental shelf off the west coast of India.

U.S. Dollar Equivalent in Indian Rupees — FY 1975 est. 5,000; FY 1974 est. 2,000

Institution	Title of Project
86. University of Washington Seattle, Washington	Endocrine Basis of Bird Migration

What makes birds migrate is still little understood. It is proposed to study the physiological basis for this major cycle in the life of birds. American and Indian scientists plan to investigate changes in endocrine gland activity in order to determine whether and to what extent these changes are related to migratory patterns.

U.S. Dollar Equivalent in Indian Rupees	FY 1975 est.	5,000
	FY 1974 est.	9,000

87. Office of Environmental Sciences, Smithsonian Institution, Washington, D.C.	Survey of the Wetlands of India

Wetlands, marshes and swamps, are the breeding grounds of a vital portion of the earth's animals of all kinds. Their preservation is essential to the existence of the living world of mankind. A survey to plan the conservation of India's threatened wetlands is proposed.

U.S. Dollar Equivalent in Indian Rupees	FY 1975 est.	5,000
	FY 1974 est.	2,000

88. Bodega Bay Institute of Pollution Ecology Berkeley, California	Establishment of a Pesticide Analytical Laboratory

The Smithsonian study of bird migration in India, which has been underway for several years, makes it possible to obtain several kinds of birds from different parts of that country for studies of the secondary effects of the use of pesticides. Laboratory analyses of tissue from these birds reveals whether dangerous levels of pesticides have been ingested by the birds which live off the pests which the pesticides are intended to control. Death of substantial numbers of birds from excessive ingestion of pesticides can mean elimination of a natural pest control mechanism often more important than man's chemicals in controling crop damaging insects.

U.S. Dollar Equivalent in Indian Rupees	FY 1975 est.	10,000
	FY 1974	5,000

	Institution	Title of Project
89.	University of Utah Salt Lake City	Evolution of Reproductive Behavior in Natural Populations of Plants and Animals

Most living things have a definite life cycle part of which is determined by environmental factors and part by the consequences of evolution. This research will study the evolution of life cycles and the influences of environment on them.

U.S. Dollar Equivalent in Indian Rupees FY 1975 est. 6,000
FY 1974 est. 2,000

90.	Bishop Museum, Honolulu, Hawaii	Study of the Serranid Fishes of India

Seabasses and groupers are among the most important commercial fishes in the Indo-Pacific region, but the systematic study of these families in that region is far from complete. The proposed studies could result in improved fisheries procedures resulting in an increase in the food supply.

U.S. Dollar Equivalent in Indian Rupees FY 1975 est. 15,000
FY 1974 est. 3,000

91.	Smithsonian Institution Libraries, Washington, D.C.	Smithsonian - National Science Foundation Translations Program

The National Science Foundation, under its special foreign currency translations program, provides translations services on scientific subjects for various federal agencies, apportioning its own budget for this purpose. Under an inter-agency agreement, the Smithsonian transfers additional funds from its own Special Foreign Currency Program to the NSF to support additional translations urgently needed to support Smithsonian scientific programs.

U.S. Dollar Equivalent in Indian Rupees FY 1974 28,000

b. New Biology Projects in India

None

V. MOROCCO

a. On-going and Pending Biology Projects in Morocco

Institution	Title of Project
92. National Museum of Natural History, Smithsonian Institution, Washington, D.C.	A Geographical and Ecological Study of the Mammals of Morocco

This project studied rats, mice and other rodents in the arid lands of Morocco in order to better understand and control these animals of great importance to man. The animals need to be studied because they befoul stored food, consume a substantial part of agricultural crops and serve as a reservoir of disease.

U.S. Dollar Equivalent in Moroccan Dirhams	FY 1973	16,000
	FY 1972	64,000
	FY 1971	92,000
	FY 1970	67,000

93. American University of Beirut, Lebanon (Incorporated in New York State)	Zoogeography and Community Structure of Sand-Beach Meiofauna of the Mediterranean Region

Meiofauna are microscopic animals which live in the water. Though minute, they are important as links in the "food chain" upon which all life, including that of man, ultimately depends. Little is known about these animals. This study in the Mediterranean region will have application to other areas.

U.S. Dollar Equivalent in Moroccan Dirhams	FY 1973	3,000

b. New Biology Projects in Morocco

None

VI. PAKISTAN

a. On-going and Pending Biology Projects in Pakistan

	Institution	Title of Project
94.	University of Washington, Seattle, Washington	Research on the Biology and Control of the Wild Boar in Pakistan

The wild boar causes crop damage in Pakistan alone estimated at $35,000,000 annually. Its control has been of concern to the Pakistani government, as it is to the other countries stretching from India to Europe. In Muslim countries, the boar is considered, like the pig, an unclean animal and its numbers are not, therefore, controlled through regular cropping. The proposed study will provide basic biological information and information on the behavior and feeding habits of the boar upon which a program of control can be based. One result might be greater agricultural self-sufficiency in Pakistan.

U.S. Dollar Equivalent in Pakistani Rupees	FY 1975 est.	30,000
	FY 1971	38,000

95.	National Museum of Natural History, Smithsonian Institution, Washington, D.C.	Taxonomic Studies of the Marine Fauna of Pakistan's Continental Shelf

The Arabian Sea is known from commercial fishing catches to be potentially highly productive. Very little is known about this sea, however, particularly about the northeastern portion off Pakistan and the mouth of the Indus River. This proposal seeks to study the continental shelf, to learn what is there, how it is distributed and in what quantities.

U.S. Dollar Equivalent in Pakistani Rupees	FY 1975 est.	52,000
	FY 1974 est.	40,000
	FY 1973	3,000

96.	Smithsonian Institution Libraries, Washington, D.C.	Smithsonian - National Science Foundation Translations Program

The National Science Foundation, under its special foreign currency translations program, provides translations services on scientific subjects for various federal agencies, apportioning its own budget for this purpose. Under an inter-agency agreement, the Smithsonian transfers additional funds from its own Special Foreign Currency Program to the NSF to support additional translations urgently needed to support Smithsonian scientific programs.

U.S. Dollar Equivalent in Pakistani Rupees	FY 1974	28,000

Institution	Title of Project
97. Texas A & M University College Station, Texas	Introduction of Black Antelope as a Game Animal

The Department of Wildlife at Texas A & M has worked for a number of years in establishing and harvesting the black buck antelope on Texas ranges. This antelope once was plentiful in its native Pakistan but has become extinct. Recently a small herd of black bucks was reintroduced and placed in a game preserve in Pakistan. This study by Texas A & M, in cooperation with the Government of Pakistan and the World Wildlife Fund, would seek to determine what is essential to survival of the black buck in Pakistan and thereby to what additional areas the antelope could be introduced. If this program is successful on a large scale, Pakistan would be provided with an important additional source of high protein food.

U.S. Dollar Equivalent in Pakistani Rupees	FY 1975 est.	34,000
	FY 1974	9,000

Institution	Title of Project
98. University of California Davis, California	Survey of Vegetation and Wildlife for Preservation in Proposed National Park System

The International Union for the Conservation of Nature and Natural Resources (I.U.C.N.) has identified some twenty species of endangered wildlife in Pakistan. Preservation of wildlife is dependent on a knowledge of the animals habitats. Several Pakistani institutions, including the Sind Wildlife Management Board and the Pakistan Zoological Survey would join The Institute of Ecology of the University of California at Davis in a study to determine the relationship of the endangered wildlife species to their respective habitats so that the planned National Park system will be sufficiently inclusive to provide sanctuaries for all endangered species.

U.S. Dollar Equivalent in Pakistani Rupees	FY 1975 est.	20,000
	FY 1973	11,000

Institution	Title of Project
99. Utah State University Logan, Utah	A Survey of the Wild Sheep and Goat Population

Utah State has had extensive experience in working with the management and conservation of wildlife in semi-arid lands, both in this country and overseas. This study, in cooperation with appropriate Pakistani wildlife organizations, would become an extension of a wild sheep survey already underway in Iran. Hope for economic benefits include tourist development and game ranching to provide additional sources of protein.

U.S. Dollar Equivalent in Pakistani Rupees	FY 1975 est.	30,000
	FY 1974	5,000
	FY 1973	2,000

	Institution	Title of Project
100.	Office of the Assistant Secretary for Science, Smithsonian Institution, Washington, D.C.	Consultation with Pakistani and American Specialists on Wildlife Habitat Research

Partial support was provided to bring together in the U.S. and in Pakistan specialists in wildlife habitat studies to develop programs for research and management in national parks.

U.S. Dollar Equivalents in Pakistani Rupees FY 1973 8,000

101.	Office of Environmental Sciences, Smithsonian Institution, Washington, D.C.	Life Cycles of Fish Parasites in Tropical Lakes

Many species of fish, an important source of food, are found in tropical lakes. The size of the catch is often limited due to high attrition caused by fish parasites. An essential step in the life cycle of certain parasites occurs when infected fish are eaten by water birds. The parasites then develop in the host birds which later return them to the water where they infect fish and the cycle again begins. This project, sponsored by the Zoological Survey of Pakistan and the Smithsonian, would study the interrelationship of the parasites, birds and fish. Successful interruption of the parasites' life cycle would lead to an increase in fish production.

U.S. Dollar Equivalent in Pakistani Rupees FY 1975 est. 20,000
FY 1974 est. 20,000

102.	Howard University Washington, D.C.	Search for New Sites of Cenozoic Mammals in Pakistan.

Knowledge of the evolution of mammals on the Indian subcontinent is still quite limited since many of the early fossil specimens were collected prior to the introduction of modern stratigraphic dating techniques. This study would initially seek to locate rock formations containing fossils representing the evolution and distribution of mammals. Identification, dating, and placement of specimen in chronological sequence would be done in cooperation with the Geological Survey of Pakistan and the University of Islamabad.

U.S. Dollar Equivalent in Pakistani Rupees FY 1975 est. 25,000
FY 1974 3,000

	Institution	Title of Project
103.	National Museum of Natural History, Smithsonian Institution, Washington, D.C.	Tropical Flora of the Indian Subcontinent.

The Smithsonian is studying the tropical flora of the Indian subcontinent. This requires periodic consultation with Pakistani botanists and the study of specimens collected on Pakistan and stored in Pakistani herbaria.

U.S. Dollar Equivalent in Pakistani Rupees	FY 1975 est.	3,000
	FY 1974 est.	3,000
	FY 1973	3,000

b. New Biology Projects in Pakistan

None

VII. POLAND

a. On-Going and Pending Biology Projects in Poland

	Institution	Title of Project
104.	University of Georgia Athens, Georgia	Interaction of Small Rodents with Human Beings

The University of Georgia has been a leader in the developing science of ecology and has innovated techniques of studying living things and their relationships. This project will suppliment an earlier grant, completed in 1972, which studied rats, mice and other rodents in a number of different situations in the temperate climate of Poland, with one likely by-product, the better control of rats. This new study carries the earlier one an essential step forward with the study of the interrelations of rodents and man.

U.S. Dollar Equivalent in Polish Zloties	FY 1975 est. 35,000
	FY 1974 est. 18,000

105.	Queen's College City University of New York	Museum Studies of Unique Specimens of Fossil Mammals

Man can better understand how to manage his own world, if he understands how he reached his present condition. This study proposes to investigate one of the critical stages in the evolution of many by studying the changes in the ear region of the fossil skulls of reptiles and mammals which lived at the time when mammals were evolving out of their reptile ancestors.

U.S. Dollar Equivalent in Polish Zloties	FY 1974 est. 3,000
	FY 1973 1,000
	FY 1972 2,000
	FY 1971 2,000

106.	Oak Ridge National Laboratory Oak Ridge, Tennessee	Temperate Zone Forests and Grassland Ecosystems

As part of the International Biological Program (IBP) worldwide network of studies of the natural environment, the present studies would seek to determine energy and productivity in a temperate zone forest ecosystem, as is being done in other projects in a tropical setting. This project will be carried out in cooperation with Polish scientific investigators.

U.S. Dollar Equivalent in Polish Zloties	FY 1975 est. 55,000
	FY 1974 est. 20,000

	Institution	Title of Project
107.	Smithsonian Tropical Research Institute, Balboa, Canal Zone Panama	Ecology of Small Animals of Tropical Grasslands

Optimal use of tropical grasslands, just as with other types of vegetation cover, depends on the proper balance of plant, animal and insect life. The role small mammals play in maintaining this balance in Panamanian grasslands is the purpose of this joint study by the Polish Institute of Ecology and the Smithsonian Tropical Research Institute. Later studies are planned to determine the roles played by plants and insects in grassland ecosystems. The studies, when completed, can provide information on which plans can be made for possible alternative uses of the grasslands, whether as wild-life preserves, grazing areas for livestock, development as croplands, or other possible combinations.

U.S. Dollar Equivalent in Polish Zloties	FY 1975 est.	45,000
	FY 1974 est.	20,000
	FY 1973	11,000

108.	The Academy of Natural Sciences, Philadelphia, Penn.	A Biochemical Investigation of Rana esculenta, a Bisexual frog of possible hybrid origin

Taxonomy is the classification of plants and animals according to their similarity or dissimilarity to related species. Recent advances in understanding the making of enzymes and proteins have provided scientists with another valuable tool in the accurate classification of living things. Opinion has differed for some time as to whether Rana esculenta is a hybrid or a separate species of frog. This study, in cooperation with the Zoological Institute in Poznan, will not only attempt to properly classify this frog by enzyme and protein analysis, but will provide the opportunity for Polish and American scientists to share the latest techniques in species identification.

U.S. Dollar Equivalent in Polish Zloties	FY 1974	7,000

	Institution	Title of Project
109.	National Museum of Natural History, Smithsonian Institution Washington, D.C.	Publication Preparations for Research on Paleozoic Graptolites

Paleontology, the study of fossil remains of living organisms has provided scientists with much of what is known about the evolution and development of plant and animal life. Graptolites are extinct marine animals which form an important link in the evolution of marine life. Recently scientists at the University of Warsaw and the Smithsonian Institution have done collaborative research on these fossils. Following an analysis of their separate and joint findings they will publish a manuscript supplementing an earlier article which appeared in Nature magazine.

U.S. Dollar Equivalent in Polish Zloties FY 1973 1,000

110.	Duke University Marine Laboratory Beaufort, North Carolina	The Role of Environmental Factors in Modifying the Effect of Pollutants on Larval Development of Marine Brachyura

A major concern of marine biologists is the adverse affect of pollutants on marine life. Various pesticides and insecticides when found in high concentrations near marine estuaries have been responsible for the deaths of large numbers of commercial shrimps and crabs. Further studies are planned in which crabs will be raised under laboratory conditions, introducing controlled amounts of known pollutants in order to determine at what level the crabs are adversely affected. This project would bring two Polish marine biologists from the University of Gdansk to Duke University for a period of four months in order to study the latest U.S. techniques, and thus lay the foundation for a cooperative research program between the two institutions.

U.S. Dollar Equivalent in Polish Zloties FY 1975 est. 38,000
FY 1974 est. 7,000

b. New Biology Projects in Poland

None

VIII. TUNISIA

a. On-going and Pending Biology Projects in Tunisia

	Institution	Title of Project
111.	National Museum of Natural History, Smithsonian Institution, Washington, D.C.	The Systematics and Physiological Ecology of Tunisian Sponge Communities

Important as a "crop" from the sea, sponge communities are equally important in terms of their relationships with other organisms that live in the sea. This study concentrates on a sponge community off the Tunisian coast, and focuses on the organisms and the principal physical factors which influence their appearance and their distribution. The field work is substantially complete on this project and a publication is in preparation.

U.S. Dollar Equivalent in Tunisian Dinars	
FY 1974 est.	10,000
FY 1971	44,000
FY 1970	21,000

	Institution	Title of Project
112.	Office of Environmental Sciences, Smithsonian Institution, Washington, D.C.	Support for the Mediterranean Marine Sorting Center, a Facility for Processing Marine Organisms

This facility was established, and operates in cooperation both with the Smithsonian Oceanographic Sorting Center in Washington, D.C., and with the local Tunisian Institute of Oceanography and Fisheries. Its function is to speed the description of the fish and other organisms of the Mediterranean Sea and the accumulation of information about where they occur and their feeding habits. The Center sorts in Tunisia the scientific collections of marine animals and plants of the countries of the region and distributes specimens by species to specialists around the world for study.

U.S. Dollar Equivalent in Tunisian Dinars	
FY 1975 est.	300,000
FY 1974 est.	260,000
FY 1973	241,000
FY 1972	199,000
FY 1970	477,000
FY 1969	216,000
FY 1967	150,000

	Institution	Title of Project
113.	Utah State University Logan, Utah	Systems Analysis of the Pre-Saharan Ecosystem of Southern Tunisia

This project is coordinated with the U.S. Desert Biome Program of the United States National Committee for the International Biological Program. It seeks on the edge of the Sahara Desert what the USIBP studies are seeking in our own western deserts, namely, information about what makes a desert a desert, whether the desert is advancing or contracting, whether its ecology is dynamic or stable, and similar questions. In answering these questions, the most sophisticated of modern tools are employed, including computer analyses of statistical models of desert ecosystems. The Tunisian Department of Agriculture is cooperating with this study as a part of its program for management and reclamation of desert lands.

U.S. Dollar Equivalent in Tunisian Dinars	FY 1975 est.	145,000
	FY 1974 est.	120,000
	FY 1972	98,000
	FY 1971	4,000

	Institution	Title of Project
114.	Office of Environmental Sciences, Smithsonian Institution, Washington, D.C.	Pollution Studies in Lake Tunis

The Lake of Tunis is a unique tropical lagoon which has served as a dump for sewage for some 2,000 years ever since the ancient city of Carthage flourished on its shores. It is an extraordinarily productive lake and sustains a substantial commercial fishery. It is at the same time the bane of residents of Tunis. Its stench, which persists throughout the year, increases to disturbing proportions in the fall of each year when the oxygen level of the lake drops, killing the fish which wash ashore in masses. It drives Tunisians away from the lake and discourages tourism which is one prime source of hard currency for the developing Tunisian economy. A study of the lake will provide information on a unique biological process and the basis for a plan to reduce the stench and the fish kill.

U.S. Dollar Equivalent in Tunisian Dinars	FY 1975 est.	10,000
	FY 1974 est.	9,000

	Institution	Title of Project
115.	National Museum of Natural History, Smithsonian Institution, Washington, D.C.	Marine Decapod Crustaceans of North Africa

The marine decapod crustaceans include shrimps, crabs, and lobsters and comprise more than 8,000 species. They are commercially important marine animals, and a knowledge of their biology and habits is useful. The aim of the present study is to produce a handbook on these animals of the North African coast which can be used by students, scientists, or fishermen. The comprehensive baseline collections made for this study will provide a foundation for future studies on other aspects of the biology of decapod crustaceans as well as for future studies on environmental change, effects of pollution, and on the migration of marine animals in the area.

U.S. Dollar Equivalent in Tunisian Dinars	FY 1974 est.	37,000
	FY 1973	25,000
	FY 1972	50,000

116.	University of Arizona Tucson, Arizona	Population Biology and Cytogenetics of Desert Mammals

In recent years, there has been an increasing awareness of man's natural environment and of the role played by plants and animals in the maintenance of that environment. This project, in cooperation with the Tunisian Association for the Protection of Nature and Environment, is studying desert mammals. A better understanding of the role played by mammals in a desert ecosystem can provide information required to maintain a productive balance of plant and animal life. It may also be possible to suggest under what condition desert areas could be utilized for crops or grazing.

U.S. Dollar Equivalent in Tunisian Dinars	FY 1975 est.	50,000
	FY 1974 est.	62,000
	FY 1973	56,000

	Institution	Title of Project
117.	University of Colorado, Boulder, Colorado	Late Tertiary Biochronology of Mammalian Faunas in the Western Mediterranean Area

Much of what is known about the evolution and development of plants and animals has come from the study of fossils. Past research carried out in Tunisia by the University of Colorado has identified the fossil remains of large numbers of mammals and other vertebrates. The purpose of this study, in cooperation with Tunisian scientists, is to determine the age and chronological appearance of mammal species, based upon the known age of the rocks in which the fossils are located. Present evidence suggests that the age and diversity of Tunisian rock formations are such as to provide the key to understanding the evolution of mammals for all of North America.

U.S. Dollar Equivalent in Tunisian Dinars	FY 1975 est.	19,000
	FY 1974 est.	27,000
	FY 1973	37,000

	Institution	Title of Project
118.	University of Michigan Ann Arbor, Michigan	Systematic Studies of African Mollusks

Snails are known carriers of diseases such as schistosomiasis and liver flukes which attack both man and domesticated animals. The University of Michigan has conducted extensive research on the biology and genetics of Indian snails and now proposes to conduct similar studies in North Africa. From this study, it is hoped to develop mechanisms for the control of snail populations based on utilization of the snails natural enemies, rather than with chemical pesticides which often have unwanted secondary effects in destroying birds and fish.

U.S. Dollar Equivalent in Tunisian Dinars	FY 1975 est.	5,000
	FY 1974 est.	1,000

b. New Biology Projects in Tunisia

None

IX. YUGOSLAVIA

a. On-going and Pending Biology Projects in Yugoslavia

	Institution	Title of Project
119.	University of Colorado Boulder, Colorado and University of California at Riverside	Cooperative Studies on the Cytotaxonomy of Yugoslavian Flora

The plants of Yugoslavia are varied because of the combination of tropical alpine and plains variaties which have taken root in its varied terrain. They are partially identified by means of the classic descriptive method, but little studied from the point of view of modern chromosome and chemical analysis. Such studies will not only contribute to the management of the plant life of Yugoslavia, but they will provide insights into the process of development of new strains of plants and of evolution itself.

U.S. Dollar Equivalent in Yugoslav Dinars	FY 1974 est.	47,000
	FY 1973	
	FY 1972	58,000
	FY 1971	51,000

120.	Office of Environmental Sciences, Smithsonian Institution, Washington, D.C.	Cooperative Marine Research Aboard the Smithsonian Research Vessel R/V Phykos

Man's dependence on the seas for food and mineral resources is increasing as the world's population continues to grow. Oceanographic studies of a sea the size of the Mediterranean can provide useful information on the processes of life in all seas. Numerous U.S. research institutions and universities have indicated an interest in utilizing the Phykos as a research vessel in order to conduct research on such topics as: the shape and make-up of the sea floor and how this effects ocean currents; the collection and distribution of plankton, one-celled plants and animals that form the food-base of sea life; the distribution of man-made and natural pollutants and their affect on marine life; and the drilling of cores through the ocean floor to determine through studies of fossils the evolution and distribution of marine life. Because of the abrupt reduction of United States holdings of Yugoslav dinars, the Institution is seeking alternative sources of funding for the research cruises of the Phykos.

U.S. Dollar Equivalent in Yugoslav Dinars	FY 1973	30,000
	FY 1972	41,000
	FY 1971	232,000
	FY 1970	40,000

	Institution	Title of Project
121.	Dartmouth College Hanover, New Hampshire	Studies of the Ecology of Lake Ohrid and its Drainage Basin

This study is examining the complex relationships among the activities of man and of the animals and plants of the drainage basin of Lake Ohrid in southern Yugoslavia. The lake has already been the site of basic descriptive studies of the fish and their evolution by the father of Yugoslav ecology, Professor S. Stankovic, which have provided a firm base for the current studies which should lead to better management of man's environment.

U.S. Dollar Equivalent in Yugoslav Dinars	FY 1974	est.125,000
	FY 1973	108,000
	FY 1972	335,000

122.	Office of Environmental Sciences, Smithsonian Institution, Washington, D.C.	A Cooperative Program in Environmental Management at Lake Skadar

An aluminum plant is under construction in the drainage basin of Lake Skadar. A drainage tunnel is proposed to carry drinking water from the lake to the Adriatic Sea. Tourism is expanding and sport fishing is taking ever larger numbers of fish from the lake. Basic studies are underway on the current biological status of the lake as well as studies to monitor the impact of these man-made "disturbances" on the health of the area.

U.S. Dollar Equivalent in Yugoslav Dinars	FY 1974	est.150,000
	FY 1973	124,000
	FY 1972	326,000

123.	Duke University Durham, North Carolina	Conference on Larval Forms

in studying many animals, particularly marine animals, it is not possible to limit investigations to adult forms of the animals. Many animals pass through several stages in their life cycles, often markedly different. This conference brought together specialists in larval forms of certain marine animals in order to compare knowledge and techniques.

U.S. Dollar Equivalent in Yugoslav Dinars	FY 1973	8,000

	Institution	Title of Project
124.	Texas Tech University Lubboc, Texas	Mammals of the Adriatic Islands and Adjacent Mainland of Yugoslavia

This project would survey the mammals of the Adriatic Islands off the Yugoslav coast and of the western slope of the Dinaric Alps in Yugoslavia. The survey will determine the kinds of mammals present and their currenct geographic and ecological distribution. It will describe the animals and study the genes as an aid to their classification.

U.S. Dollar Equivalent in Yugoslav Dinars FY 1974 est. 20,000

b. New Biology Projects in Yugoslavia

None

X. MULTI-COUNTRY BIOLOGY PROJECTS

a. On-going and Pending Multi-Country Biology Projects

	Institution	Title of Project
125.	U.S. National Committee for the International Biological Program, National Academy of Sciences, Washington, D.C.	USIBP Training, Symposia, and Research Development in the 'Excess Currency' Countries

The International Biological Program seeks to promote the study of nature's productive process particularly by focussing talent and money on problems which can not readily be studied in any one nation. The U.S. contribution is a series of complex studies of entire climatic regions like temperate forests and grasslands or tropical forests or deserts. Studies initiated in the U.S. are of substantially greater value if they can be compared with carefully prepared parallel studies in other parts of the world. Smithsonian excess foreign currencies have contributed to the development of a number of such parallel studies.

U.S. Dollar Equivalent in Egyptian Pounds	FY 1975 est.	6,000
	FY 1974 est.	9,000
	FY 1973	2,000
U.S. Dollar Equivalent in Indian Rupees	FY 1975 est.	22,000
	FY 1974 est.	27,000
	FY 1972	9,000
	FY 1971	10,000
U.S. Dollar Equivalent in Pakistani Rupees	FY 1975 est.	15,000
	FY 1974 est.	10,000
U.S. Dollar Equivalent in Polish Zloties	FY 1975 est.	14,000
	FY 1974 est.	33,000
	FY 1973	11,000
	FY 1972	4,000
	FY 1971	10,000
U.S. Dollar Equivalent in Yugoslav Dinars	FY 1974 est.	----
	FY 1973 est.	----
	FY 1972	2,000
	FY 1971	10,000
U.S. Dollar Equivalent in Tunisian Dinars	FY 1975	1,000
	FY 1973	2,000

b. New Multi-Country Biology Projects

None

C. ASTROPHYSICS AND EARTH SCIENCES

I. No On-going, Pending or New Astrophysics Projects in Burma

II. EGYPT

a. On-going and Pending Astrophysics and Earth Sciences Project in Egypt

	Institution	Title of Project
126.	Smithsonian Astrophysical Observatory, Cambridge, Massachusetts	Research in Theories of Planetary Motion

This project involves the use of computer facilities already existing in Egypt to test a theory which may better explain the movements of the planets in our solar system, including the motion of the earth. This is a cooperative venture between American and Egyptian scientific investigators.

U.S. Dollar Equivalent in Egyptian Pounds	FY 1975 est.	40,000
	FY 1974 est.	40,000
	FY 1972	39,000
	FY 1971	24,000

127.	University of Pennsylvania, Philadelphia, Pennsylvania	Libyan Desert Glass Occurrence

Tektite, or natural "glass", occurs many places in the world, and theories vary whether the origin of this glass comes from impact, fusion at high temperatures, volcanic action, or even from an extraterrestrial source such as meteorites. In one of the most remote areas on the face of the earth--the region near the borders of Egypt, Libya, and the Sudan--tektites are strewn over a broad region. This project, in cooperation with the Egyptian Geological Survey, will pay one or several visits to the area, as needed, in an attempt to establish the nature and origin of this Libyan Desert "glass".

U.S. Dollar Equivalent in Egyptian Pounds	FY 1975 est.	50,000
	FY 1974	50,000
	FY 1972	71,000

128.	American Research Center in Egypt, Princeton, New Jersey	Medieval Islamic Astronomy A Study of Arabic Scientific Manuscripts in Cairo

Medieval Islamic studies of astronomy are especially important to today's student of the history of science. The Egyptian National Library in Cairo contains the world's largest collection of unstudied Arabic manuscripts relating to astronomy and mathematics and dating from the medieval period. A critical catalogue of these manuscripts and the scientific analysis of work works of particular importance are the objectives of this study.

U.S. Dollar Equivalent in Egyptian Pounds	FY 1975 est.	45,000
	FY 1974 est.	50,000
	FY 1973	33,000

III. INDIA

a. On-going and Pending Astrophysical and Earth Sciences Projects in India

	Institution	Title of Project
129.	Harvard University and Smithsonian Astrophysical Observatory, Cambridge, Massachusetts	Thermal Emission and Absorption of Diatomic Molecules

This study aims to determine the physical constituents of late-type stars. By reproducing in the laboratory what they think is happening on such stars, and observing the lines in the spectrum produced by each type of molecule, astronomers are then able to confirm the existence of such molecules in a star by looking for the corresponding lines in the spectrum it produces. Diatomic molecules are molecules consisting of two atoms. Some of the chemical elements common on the earth are composed of this type of molecule.

U.S. Dollar Equivalent in Indian Rupees	FY 1975 est.	5,000
	FY 1973	14,000

130.	Smithsonian Astrophysical Observatory, Cambridge, Massachusetts	Studies in Geodesy, Geophysics, and Celestial Mechanics at the Naini Tal Observing Station

This project is intended to continue, using foreign currencies, a program of cooperation between the Smithsonian Astrophysical Observatory and the Naini Tal Observing Station in India that has gone on since 1958. Naini Tal has served as one of SAO's global network of stations tracking satellites for NASA. The SAO tracking effort has already resulted in data which provide a mathematical description of this planet's deviations from a perfect sphere as well as much of what is known of atmospheric densities above 200 km.

U.S. Dollar Equivalent in Indian Rupees	FY 1975 est.	5,000
	FY 1974 est.	8,000
	FY 1973	3,000
	FY 1972	----
	FY 1971	2,000

131.	University of Hawaii Honolulu, Hawaii	Gravity Studies in India

The force of gravity varies in different parts of the earth. Measurement of these variations makes possible determination of the density and from this the composition of the materials beneath the surface of the earth, and are thus an important element in the exploration for oil and minerals. These explorations are especially important in a developing country such as India. In addition, Indian data are lacking which are essential to the world-wide description of the solid-earth environment and of gravity.

U.S. Dollar Equivalent in Indian Rupees	FY 1975 est.	5,000
	FY 1974 est.	25,000
	FY 1971	2,000

	Institution	Title of Project
132.	Smithsonian Astrophysical Observatory, Cambridge, Massachusetts	Atmospheric Measurements Through Radio Tropospheric Scatter Techniques

The troposphere is a layer of the earth's atmosphere below the stratosphere, about 7 to 10 miles above the surface of the earth, where temperatures decrease rapidly with altitude. In this study, radio signals or waves will be sent between two different points in India. Changes in these waves as they pass through the troposphere will provide evidence of its nature. This data can result in significant improvement of the operation of the Smithsonian Astrophysical Observatory's Satellite Tracking System.

U.S. Dollar Equivalent in Indian Rupees	FY 1975 est.	5,000
	FY 1974 est.	14,000
	FY 1972	19,000
	FY 1971	2,000

133.	Smithsonian Astrophysical Observatory, Cambridge, Massachusetts	Measurement of the Relative Energy of Cosmic Rays and Their Effects at Varying Depths Underground.

High energy particles from outer space cosmic rays produce secondary particles called mesons when those from outer space strike the Earth's atmosphere or the Earth itself. Both particles are capable of their own effects and of penetrating the Earth to varying depths depending on their energy. It is proposed to count the particles penetrating as deep as 8,000 meters into the Earth's surface by monitoring counters placed in the deepest gold mine in India and to compare the numbers and kinds of particles reaching this depth with the numbers and kinds recorded at other depths.

U.S. Dollar Equivalent in Indian Rupees	FY 1975 est.	20,000
	FY 1974 est.	93,000
	FY 1973	2,000

134.	National Museum of Natural History, Smithsonian Institution, Washington, D.C.	Investigation of the Lonar Craters in Central India

Deep core-drillings of the Lonar craters in central India have demonstrated that they were caused by the impact of a major meteor and that they are very much like impact craters on the moon. Field studies have produced remarkable new samples of impact-generated rocks like materials brought back from the moon and have revealed new problems related to their origin and impact cratering in general.

U.S. Dollar Equivalent in Indian Rupees	FY 1975 est.	5,000
	FY 1974 est.	5,000
	FY 1973	5,000

	Institution	Title of Project
135.	Iowa State University Ames, Iowa	Stratigraphy and Geology of Siwalik Deposits

The Siwalik hills of Northwest India are famous for their fossil-bearing beds. Some of the major discoveries of modern paleontology have come from these fossil-bearing strata. The present project aims to increase our knowledge of the stratigraphy and geology of these hills. The Principal Investigator served as a staff geologist on a Yale University expedition which discovered major primate fossils in the Siwalik Hills several years ago.

U.S. Dollar Equivalent in India Rupees	FY 1975 est.	18,000
	FY 1974	10,000

136.	Smithsonian Astrophysical Observatory, Cambridge, Massachusetts	Design of a Mosaic Telescope

Nearly all observational astronomers feel a strong need for increased light-gathering power, which can be obtained by using larger telescopes. Very large telescopes are extremely expensive, however, and the problems of constructing large mirrors are immense. It is, therefore, proposed to experiment with designs for a telescope consisting of many small mirrors. This study, in cooperation with Allahabad University, will complement the studies being performed on the Smithsonian Astrophysical Observatory's Multiple-Mirror Telescope.

U.S. Dollar Equivalent in Indian Rupees	FY 1975 est.	22,000
	FY 1974	80,000

137.	Wesleyan University Middletown, Connecticut	World-Wide Historical Survey of the History of Work in the Physics of the Ionosphere

The history of science is a relatively new branch of both historical and scientific studies. Language and political barriers have prevented full understanding of the origins, directions and progress of work in other nations. This proposal to examine past research in other nations into the nature of one of the upper layers of the Earth's atmosphere is intended to help eliminate duplication in such studies, coordinate current activities and uncover neglected but potentially fruitful lines of research.

U.S. Dollar Equivalent in Indian Rupees	FY 1975 est.	5,000
	FY 1974	5,000

138. Smithsonian Institution Libraries, Washington, D.C.

Smithsonian - National Science Foundation Translations Program

The National Science Foundation, under its special foreign currency translations program, provides translations services on scientific subjects for various federal agencies, apportioning its own budget for this purpose. Under an inter-agency agreement, the Smithsonian transfers additional funds from its own Special Foreign Currency Program to the NSF to support additional translations urgently needed to support Smithsonian scientific programs.

U.S. Dollar Equivalent in Indian Rupees	FY 1974	7,000

b. New Astrophysical and Earth Sciences Projects in India

	Institution	Title of Project
139.	University of California San Diego, California	The Effects on Cosmic Rays on Terrestrial and Extra-Terrestrial Materials.

In the atomic age, the effects of radioactivity have become well known. The rate at which radioactive materials change into inert, stable materials can be measured, and hence the amount of stable material in a given substance provides information about its age--how long it has taken the radioactive material to change into inert material at the known rate of change. This study aims to look at radiation effects in substances both from outside the earth's atmosphere (meteorites) and those recovered from the earth (geological and archeological specimens) in an effort to determine other effects of radiation. The kinds of analysis contemplated are similar to many of the studies which have been made of lunar samples brought back to the earth by the American astronauts.

U.S. Dollar Equivalent in Indian Rupees FY 1975 est. 4,000

140.	Harvard University Cambridge, Massachusetts	Studies of the Excitation Processes in Stellar, Planetary and Cometary Atmospheres

The processes which produce "excitation," or release of energy, provide important information about the processes going on in the atmospheres of stars, planets, and comets. This is a laboratory study which will simulate processes believed to be taking place in different celestial atmospheres in an effort to prove that what we believe is correct.

U.S. Dollar Equivalent in Indian Rupees FY 1975 est. 5,000

141.	Oregon State University Corvallis, Oregon	The Role of the Reaction Between Seawater and the Oceanic Crust in Regulating the Chemical Composition of Seawater

In recent years, there has been an increasing awareness of the adverse affects on marine life resulting from chemical changes in seawater caused by the indiscriminate dumping of pollutants in the world's oceans. If marine life is to be maintained, the chemical composition of seawater must be kept in proper equilibrium. Determining the extent to which the interaction of the sea and the ocean's crust assists in maintaining this chemical equilibrium is the purpose of this study, to be jointly sponsored by the Physical Research Laboratory at Ahmedabad, India.

U.S. Dollar Equivalent in Indian Rupees FY 1975 est. 5,000

IV. MOROCCO

No On-going, Pending or New Astrophysics and Earth Sciences Projects in Morocco

V. PAKISTAN

a. On-going and Pending Astrophysics and Earth Sciences Projects in Pakistan

	Institution	Title of Project
142.	Smithsonian Institution Libraries, Washington, D.C.	Smithsonian - National Science Foundation Translations Program

The National Science Foundation, under its special foreign currency translations program, provides translations services on scientific subjects for various federal agencies, apportioning its own budget for this purpose. Under an inter-agency agreement, the Smithsonian transfers additional funds from its own Special Foreign Currency Program to the NSF to support additional translations urgently needed to support Smithsonian scientific programs.

U.S. Dollar Equivalent in Pakistani Rupees FY 1974 7,000

b. New Astrophysics and Earth Sciences Projects in Pakistan

None

VI. POLAND

a. On-Going and Pending Astrophysics and Earth Sciences Projects in Poland

	Institution	Title of Project
143.	Smithsonian Astrophysical Observatory, Cambridge, Massachusetts	Colloquim on Reference Coordinate Systems for Earth Dynamics

As the earth moves through space, its poles of rotation can be said to wander as its axis tilts. Continents are now acknowledged to "drift" with respect to each other. Where then is ground zero, the reference frame or bench mark for geodetic measurements? An international panel will prepare a book defining the problem and proposing a solution.

U.S. Dollar Equivalent in Polish Zlotys	FY 1973	58,000

144.	Smithsonian Astrophysical Observatory, Cambridge, Massachusetts	Free-Falling Body Experiment

One of the ways to measure the gravitational field of the earth is to observe a free-falling body coming in from space. Precision-measurements of a re-entering very heavy man-made satellite will be made by NASA. Analysis of this data in Poland will provide information on the gravitational field.

U.S. Dollar Equivalent in Polish Zlotys	FY 1975 est.	87,000
	FY 1974	4,000

145.	Smithsonian Astrophysical Observatory, Cambridge Massachusetts	Contributions to International Satellite Geodesy

A cooperative international program of satellite observation is engaged in studies seeking to determine the true shape of the earth. A number of countries, including Poland, are tracking the same satellites being tracked by the United States. Support for the existing tracking station at Borowiec will not only enhance the study of local geodetic problems but also provide data for global research in polar motion and related fields.

U.S. Dollar Equivalent in Polish Zlotys	FY 1975 est.	90,000
	FY 1974	60,000
	FY 1973	31,000

146.	The University of Texas Austin, Texas	Heavy Element Synthesis by the r-process

Astrophysicists have predicted the existence of many elements not yet discovered. The r-process is the one which produces the heavy radioactive metallic elements. In theory, as yet undiscovered superheavy elements exist in stars. Whether the r-process is responsible for the creation of these theortical superheavy elements is the subject of this study, in cooperation with the University of Warsaw.

U.S. Dollar Equivalent in Polish Zlotys	FY 1974	2,000

	Institution	Title of Project
147.	Smithsonian Astrophysical Observatory, Cambridge Massachusetts	General History of Astronomy Editorial Advisory Board Meeting

Astronomy, the oldest of the sciences, has long served as an inspiration to mankind in the search for the physical meaning of the universe. The history of astronomy is the story of one scientific revolution after another. The worlds finest astronomers have come together for the first time to pool their talents to plan and write a unique four-volume work, that none would have been able individually to write, which will authoritatively tell the amazing history of this age-old science.

U.S. Dollar Equivalent in Polish Zlotys	FY 1973	5,000

148.	Smithsonian Astrophysical Observatory, Smithsonian Institution, Cambridge, Massachusetts	Study of 16th Century Astronomical Manuscripts in Poland

During the 16th Century, the "Age of Discovery" a number of major centers for science, particularly astronomy, developed in what is present-day Poland. This is a study of manuscripts and books in Wroclaw and Poznan, and is an enlargement on cooperative work already begun on Copernicus, particularly the translation of the Birkenmajer Copernican Studies, the translation of which was funded several years ago by the Smithsonian Foreign Currency Program.

U.S. Dollar Equivalent in Polish Zlotys	FY 1975 est.	7,000
	FY 1974 est.	5,000

b. New Astrophysics and Earth Sciences Projects in Poland

VII. TUNISIA

a. On-Going and Pending Astrophysics and Earth Sciences Projects in Tunisia

	Institution	Title of Project
149.	Duke University Durham, North Carolina	Sedimentation Studies at Bahiret El Bibane on the Tunisian Coast

Sedimentation, the process by which many of the geological strata under the earth were formed, is a process which is still going on today. A lagoon located in South Tunisia affords an unusual opportunity to study the process. An understanding of sedimentation and sedimentary strata already formed in the geological past is indispensable for any systematic exploration for oil or minerals beneath the surface of the earth. The Principal Investigator hopes to obtain data which can be compared with data already gathered in the Bahamas.

U.S. Dollar Equivalent in Tunisian Dinars	
FY 1975 est.	15,000
FY 1974 est	15,000
FY 1973	16,000
FY 1972	9,000

b. New Astrophysics and Earth Sciences Projects in Tunisia

None

VIII. YUGOSLAVIA

No On-going, Pending or New Astrophysics and Earth Sciences Projects in Yugoslavia

IX. MULTI-COUNTRY

a. On-Going and Pending Multi-Country Astrophysics and Earth Sciences Projects

	Institution	Title of Project
150.	Center for Short-Lived Phenomena Smithsonian Institution Washington, D.C. and Cambridge, Massachusetts	Excess Currency Support for the Center for Short-Lived Phenomena

The Center for Short-Lived Phenomena is a clearing house for the receipt and dissemination of information concerning rare or infrequent natural events that might otherwise go unobserved or uninvestigated; like remote volcanic eruptions, the birth of new islands in the ocean, the fall of meteorites, large fire balls, sudden changes in biological or ecological systems, and so on. With today's concern for the natural environment, the Center for Short-Lived Phenomena serves a need of the American scientific community, since it collects and disseminates information about natural events while they are happening and makes it possible in many cases for scientists to study them while they are happening. The utility of this is obvious in the case of phenomena such as erupting volcanoes, tidal waves, plagues of locusts, and similar occurrences which can have such a drastic impact on man and his environment. If the nature of some of these phenomena were better understood preventive or protective measures could be more readily applied.

U.S. Dollar Equivalent in Egyptian Pounds	FY 1975 est.	4,000
	FY 1974 est.	2,000
U.S. Dollar Equivalent in Indian Rupees	FY 1975 est.	4,000
	FY 1974 est.	2,000
	FY 1972	3,000
U.S. Dollar Equivalent in Pakistani Rupees	FY 1975 est.	4,000
	FY 1974	2,000
U.S. Dollar Equivalent in Polish Zlotys	FY 1975 est.	4,000
	FY 1974 est.	2,000
U.S. Dollar Equivalent in Tunisian Dinars	FY 1975 est.	4,000
	FY 1974 est.	4,000
U.S. Dollar Equivalent in Yugoslavian Dinars		
	FY 1972	3,000

D. MUSEUM PROGRAMS

I. Burma

No On-going, Pending or New Museum Programs in Burma

D. MUSEUM PROGRAMS

II. EGYPT

a. On-Going and Pending Museum Projects in Egypt

	Institution	Title of Project
151.	National Museum of History and Technology, Smithsonian Institution, Washington, D.C.	Studies of Islamic Manuscripts on Medicine and Pharmacy in Cairo and Alexandria

Modern Western medicine owes a large debt to medieval Islamic medicine. This project is a continuation of field work done in 1967 and 1971 on a comprehensive history of medieval Islamic contributions to the development of medical science. Ancient manuscripts are being studied across the entire area covered by medieval islamic culture. Manuscripts in the unique collections in Alexandria and Cairo are being studied as a part of this larger undertaking.

U.S. Dollar Equivalent in Egyptian Pounds FY 1974 2,000

152.	Smithsonian Institution Traveling Exhibition Service, Washington, D.C.	Exhibition of the Tapestries of Harrania

Under the direction of the Egyptian artist, Ramses Wissa Wassef, the Egyptians are reviving the art of tapestry making in the village of Harrania. This project will study the traditional processes used in Harrania, and will result in an exhibition describing the tapestry making process. The exhibition will circulate in the United States under the auspices of the Smithsonian Institution Traveling Exhibition Service. Weavers from Harrania will accompany the exhibition to demonstrate their art and technique. A grant from the EXXON Corporation is providing the needed hard currency support amounting to $20,000.

U.S. Dollar Equivalent in Egyptian Pounds FY 1975 est. 12,000
FY 1974 est. 7,000

b. New Museum Programs in Egypt

	Institution	Title of Project
153.	University of Illinois	Development of an Audio-Visual Resource Center for the teaching of Near Eastern Civilization

This project is concerned with one phase of the establishment at the University of Illinois of an archive of teaching resources: photographs, slides, movies, audio tapes, maps, reference books and other materials related to ancient Near Eastern civilizations and culture. This phase focuses on the Egyptian area, but the University of Illinois expects to enlarge the project to include other ancient Near Eastern cultures as well.

U.S. Dollar Equivalent in Egyptian Pounds FY 1975 est. 5,000

III. GUINEA

No On-going, Pending or New Museum Programs in Guinea

IV. INDIA

a. On-going and Pending Museum Programs in India

Institution	Title of Project
154. Theater in the Street New York, New York	Street Theater Around the World

This study will document on film and tape traditional Indian outdoor theater performances. This thorough study of the extraordinarily rich Indian outdoor theater conventions is intended to serve as a basis for teaching and innovation in theater by experimental theater groups in the United States.

U.S. Dollar Equivalent in Indian Rupees	FY 1975 est.	15,000
	FY 1974	2,000

155. National Museum of History and Technology Smithsonian Institution, Washington, D.C.	A Study of Medical History in India

The debt of modern western medicine to the spectacular advances made by physicians under medieval Islamic rulers is increasingly clear as a result of recent studies of ancient Arabic language manuscripts. This study extends into India studies of the contributions to medicine made by medieval Islamic physicians, drawing upon certain arabic language manuscripts held in Indian collections. This phase of the study will later be expanded to include a general history of medicine in the Indian area.

U.S. Dollar Equivalent in Indian Rupees	FY 1975 est.	15,000
	FY 1974 est.	10,000
	FY 1973	2,000

156. Smithsonian Institution Libraries, Washington, D.C.	Smithsonian - National Science Foundation Translations Program

The National Science Foundation, under its special foreign currency translations program, provides translations services on scientific subjects for various federal agencies, apportioning its own budget for this purpose. Under an inter-agency agreement, the Smithsonian transfers additional funds from its own Special Foreign Currency Program to the NSF to support additional translations urgently needed to support Smithsonian scientific programs.

U.S. Dollar Equivalent in Indian Rupees	FY 1974	18,000

	Institution	Title of Project
157.	National Museum of History and Technology, Smithsonian Institution, Washington, D. C.	Translation of Manuscripts Available in India on Foundry Practices in Ancient Russia, and on the Russian travels of Robert Fulton

This project would support the translation of certain Russian language manuscripts which are held in India and which relate to ancient industrial technology, particularly to foundry practices and to the travels of American steam power pioneer Robert Fulton in Russia.

U.S. Dollar Equivalent in Indian Rupees FY 1975 est. 5,000

158.	Smithsonian Astrophysical Observatory, Cambridge, Massachusetts	Study of Indian-made Astrolabes in Indian Museums

Important advances in astronomy were made along with other advances in science during the period when Islamic culture was a major influence in what is now India. A number of unusual specimens of astrolabes, medieval instruments for determining the altitude of the sun and other heavenly bodies, are today preserved in Indian collections, and their study will provide yet another piece in the reconstruction of the history of science.

U.S. Dollar Equivalent in Indian Rupees FY 1975 est. 3,000

159.	United States National Museum, Smithsonian Institution, Washington, D.C.	Development of a Teaching Museum of Science and Technology

Under the U.S. National Museum Act, the Smithsonian has joined in supporting the program of the International Council of Museums (ICOM), a UNESCO affiliate, to develop teaching museums of science and technology in Asia and Africa. In this first phase, the development of a laboratory in India is being supported. The laboratory will prepare teaching exhibits in science and technology for circulation in industrializing nations; will provide opportunities for American museum specialists to observe the effectiveness of exhibits in backgrounds; and will train technicians from museums in the recipient nations to develop exhibitions meeting the science teaching needs of their individual countries.

U.S. Dollar Equivalent in Indian Rupees FY 1975 est. 10,000

b. New Museum Program Projects in India

None

V. Morocco

No On-going, Pending or New Museum Programs in Morocco

VI. PAKISTAN

a. On-going and Pending Museum Programs in Pakistan

	Institution	Title of Project
160.	National Museum of History and Technology, Smithsonian Institution, Washington, D. C.	Studies of the Islamic Manuscripts of Medicine and Pharmacy as well as Libraries, Museums, and Medico-Pharmaceutical Collections in Pakistan.

The debt of modern western medicine to the advances made by practitioners under medieval Islamic rulers is increasingly clear as a result of recent studies of ancient Arabic language manuscripts. This research project extends to Pakistan a multi-faceted investigation of medieval Islamic contributions to medical science. It is primarily concerned with contributions of Abulcasis al-Zahrawi, a tenth century Muslim physician; of al-Biruni, an eleventh century Muslim scholar; and a catalogue and study of various Arabic medical manuscripts in Pakistani collections.

U.S. Dollar Equivalent in Pakistani Rupees FY 1974 1,000

161.	Smithsonian Institution Libraries, Washington, D.C.	Smithsonian - National Science Foundation Translations Program

The National Science Foundation, under its special foreign currency translations program, provides translations services on scientific subjects for various federal agencies, apportioning its own budget for this purpose. Under an inter-agency agreement, the Smithsonian transfers additional funds from its own Special Foreign Currency Program to the NSF to support additional translations urgently needed to support Smithsonian scientific programs.

U.S. Dollar Equivalent in Pakistani Rupees FY 1974 18,000

b. New Museum Programs in Pakistan

	Institution	Title of Project
162.	American Association of Museums, Committee for the International Council of Museums.	1975 Meeting of the Conservation Subcommittee of the International Council of Museums

Pakistan has invited the Conservation Subcommittee of the International Council of Museums to convene in 1975 in Pakistan to bring together experts on the conservation and preservation of museum artifacts and cultural monuments, to exchange information on this rapidly developing field of museum technology and to advise on Pakistani conservation problems. Papers presented at the meeting will be published to make available the latest information on conservation techniques.

U.S. Dollar Equivalent in Pakistani Rupees FY 1975 20,000

VII. POLAND

a. On-Going and Pending Museum Programs in Poland

	Institution	Title of Project
163.	American Numismatic Society Washington, D.C.	International Numismatic Congress

The American Numismatic Society and the National Museum of History and Technology were host for the first time in 1973 to the International Numismatic Congress. Four distinguished Polish scholars received zloty awards to present their research results at the Congress and to share research plans with scholars in several United States institutions.

U.S. Dollar Equivalent in Polish Zlotys FY 1973 9,000

164.	National Academy of Sciences and the Office of Seminars, Smithsonian Institution	The Nature of Scientific Discovery, An International Symposium

In cooperation with the Copernicus Society of America and the U.S. National Commission for UNESCO, the Smithsonian Institution and the National Academy of Sciences presented in April 1973 a symposium in observance of the 500th anniversary of the birth of Nicolaus Copernicus. The symposium provided a forum for distinguished scholars from America and abroad to discuss the significance of Copernicus and the Age of Discovery, and to project future paths of scientific discovery. The Smithsonian Foreign Currency Program contributed to the participation of Polish Scholars in the symposium. The editing of the resulting publication, and preparation for circulation in the U.S. of a documentary film and of an exhibit of astronomical instruments and cultural objects associated with Copernicus life and times.

U.S. Dollar Equivalent in Polish Zlotys FY 1973 7,000

165.	National Trust for Historic Preservation, Washington, D.C.	Advanced Study of Conservation and Restoration Methods Applied to Historic Monuments and Sites in Poland

Poland is an acknowledged world leader in the development of a coordinated approach to the problems of conservation and restoration of historic buildings, monuments and other sites. Its accomplishments in overcoming the devastation of World War II have been enormous. Since a coordinated approach for conservation and restoration of American historical monuments is only in its beginning stages, Polish programs have been chosen for study and as a reference in the planning of American programs.

U.S. Dollar Equivalent in Polish Zlotys FY 1974 est. 21,000

	Institution	Title of Project
166.	National Museum of History and Technology, Smithsonian Institution, Washington, D.C.	Preparation of ethnographic materials to supplement national collections

The Smithsonian was given several years ago a small collection of ethnographic materials (costumes, household objects, etc.) by the Museum at Lodz, Poland. The museum offered to expand this collection to make it suitable for circulation by the Smithsonian Institution Traveling Exhibition Service and thus to make it available to many other American museums. This project supported curatorial travel to Poland to study and collect materials to augment the basic collection.

U.S. Dollar Equivalent in Polish Zlotys FY 1973 2,000

167.	Office of Exhibit Programs, Smithsonian Institution, Washington, D.C.	"It All Depends", an animated film presenting basic ecological principles.

The Smithsonian Institution's Museum of Natural History has developed an exhibition called, "It All Depends: How Man Affects and is Affected By The Natural Environment". It deals with man as a member of a community that includes all living things. Emphasizing interdependence, the exhibition explores man's roles in the natural world and the environmental consequences of those roles. The exhibition will include two animated films entitled: 1) Predator and Prey; one animal's meat is another animal's population control; and 2) Foodwebs; energy is transmitted from one living thing to another. Film Polsky in Warsaw was chosen to produce the films because of the unique artistic and technological quality of its animated films.

U.S. Dollar Equivalent in Polish Zlotys FY 1973 16,000

168.	Office of Exhibit Programs, Smithsonian Institution, Washington, D.C.	"Power in Numbers", an animated film exploring the U.S. Census as a basic inventory of American life.

The Smithsonian's Museum of History and Technology is preparing a major new exhibit area devoted to the history of the democratic experience in America to be opened to the public in 1974. An important part of this exhibition will be devoted to showing how the U.S. Census plays a basic role in the democratic process as an indicator of the political power of America. Because the theme is not one which can be effectively presented simply through the display of objects, an animated film is being prepared by Film Polsky in Warsaw because of the unique artistic and Technological quality of its animated films. The script for the film was prepared by the Smithsonian.

U.S. Dollar Equivalent in Polish Zlotys FY 1973 36,000

169. National Museum of History and Technology, Smithsonian Institution, Washington, D.C. — A Survey of Polish Textiles, Past and Present

Poland is today a center of innovation in textile design and it has a long tradition of fine textile manufacture. This museum exchange project is part of a larger study particularly of the introduction of the Jacquard loom, of the examination of pre- and post-Jacquard loom devices used for weaving complex patterned fabrics in Poland, and of the textiles produced on these looms with a view to preparation of an exhibition at the Smithsonian.

U.S. Dollar Equivalent in Polish Zlotys — FY 1974 — 3,000

170. Department of Cultural History, Smithsonian Institution, Washington, D.C. — Traditional Polish Musical Instruments

The Smithsonian's Department of Cultural History and the Museum of Musical Instruments in Poznan, Poland joined in the study and exchange of traditional folk musical instruments of Polish, American and American Indian origin.

U.S. Dollar Equivalent in Polish Zlotys — FY 1973 — 2,000

b. New Museum Programs in Poland

	Institution	Title of Project
171.	National Air and Space Museum, Smithsonian Institution, Washington, D.C.	To Conduct an Exchange of Historic Aircraft and to Study the History of Flight in Poland

Aircraft of two World Wars and of civilian airlines of Eastern Europe are available for study and exchange in Poland. It is proposed to support the exchange of airframes and parts within the programs of the rapidly developing National Air and Space Museum.

U.S. Dollar Equivalent in Polish Zlotys FY 1975 5,000

172.	American Association of Museums, Washington, D.C.	Historic Preservation Seminar

Since the Second World War, Poland has emerged as a leading country in the fields of restoration and preservation of important buildings and other monuments and sites, particularly with regard to the development of coordinated plans and public policy. For this reason, the American Association of Museums plans to hold a seminar in Poland for Americans with professional interests or public policy responsibilities in historic preservation for the purpose of furthering American efforts in the field.

U.S. Dollar Equivalent in Polish Zlotys FY 1975 30,000

173.	Institute of Advanced Study, Princeton, New Jersey	Study of Medieval Scientific Manuscripts at Krakow, Poland

Krakow, Poland, was one of the centers of Central European scholarship in the sciences, particularly in astronomy during the late medieval period. This project would support the collaboration of an American scholar and historian of science with current Polish efforts at examining and interpreting manuscripts of the period.

U.S. Dollar Equivalent in Polish Zlotys FY 1975 est. 5,000

VIII. Tunisia

a. On-going and Pending Museum Programs in Tunisia

	Institution	Title of Project
174.	Office of Museum Programs, Smithsonian Institution, Washington, D.C.	Publication of the Cultural Property Handbook of the International Council of Museums

The Smithsonian, the Brooklyn Museum, the International Council of Museums (ICOM), and the Tunisian National Committee for ICOM have joined to support compilation of a compendium of the cultural property laws of the nations of the world. The publication and worldwide distribution of this compendium will contribute to the control of illegal international trade in cultural objects and the development of similar national laws for this purpose. This publication will enable cultural property importing countries of the world to determine whether such property comes to them through legal channels. Cultural property exporting nations will have a basic reference for the promulgation or amendment of laws regulating international traffic in cultural property.

U.S. Dollar Equivalent in Tunisian Dinars FY 1974 35,000

175. Office of Museum Programs, Smithsonian Institution, Washington, D.C. — Tunis Museum of Natural History

The Smithsonian Foreign Currency Program has supported a number of major natural sciences projects in Tunisia, notably in marine biology, desert ecology, and geology. Resulting research collections have been deposited in Tunisia where a national museum of natural history is being organized. The Smithsonian is assisting the natural sciences agency, the Tunisian Association for the Protection of Nature and the Environment (TAPNE) in establishing this museum which will serve as a base for future scholarly exchanges between the United States and Tunisia.

U.S. Dollar Equivalent in Tunisian Dinars FY 1975 est. 30,000
FY 1974 est. 26,000

b. New Museum Programs in Tunisia

None

IX. YUGOSLAVIA

No On-going, Pending or New Museum Programs in Yugoslavia

X. MULTI-COUNTRY

a. On-Going and Pending Multi-country Museum Programs

	Institution	Title of Project
176.	Division of Performing Arts, Smithsonian Institution, Washington, D. C.	A Study of Cultural Cognates and Living Museology

The Smithsonian Bicentennial Program proposes to present side-by-side on the Mall in Washington and in conjunction with Bicentennial Programs in interested states, practicióners of folk arts and crafts as they exist in the lands of our forefathers and as they survive in the homes and communities of America today. This program, "Old Ways in the New World", is carefully seeking out the grass-roots practicióners of folk traditions, comparing those of the land of origin with those surviving in this country, and publishing the results as anthropological studies of cultural change and as lively films and records for both students and folk art enthusiasts.

U.S. Dollar Equivalent in Egyptian Pounds	FY 1975 est.	10,000
	FY 1974 est.	5,000
U.S. Dollar Equivalent in Indian Rupees	FY 1975 est.	5,000
	FY 1974 est.	2,000
U.S. Dollar Equivalent in Moroccan Dirhams	FY 1973	2,000
U.S. Dollar Equivalent in Pakistani Rupees	FY 1975 est.	5,000
	FY 1974 est.	1,000
U.S. Dollar Equivalent in Polish Zlotys	FY 1975 est.	20,000
	FY 1974	20,000
	FY 1973	1,000
U.S. Dollar Equivalent in Tunisian Dinars	FY 1975 est.	10,000
	FY 1974 est.	5,000
	FY 1973	1,000
U.S. Dollar Equivalent in Yugoslav Dinars	FY 1973	5,000

177.	Office of The Assistant Secretary for Public Service, Smithsonian Institution, Washington, D. C.	Smithsonian Overseas Research Projects

The Smithsonian Institution supports scholarly research in many parts of the world. The Institution is preparing material for publication summarizing this work and its results.

U.S. Dollar Equivalent in Foreign Currencies	FY 1975 est.	3,000
	FY 1973	3,000

	Institution	Title of Project
178.	Office of Museum Programs, Smithsonian Institution, Washington, D. C.	A Program of Professional Museum Exchanges

This program provides support for professional training of museum curators and technicians in collaboration with museums abroad through two-way exchanges of personnel for on-the-job training. Participants are expected to serve in museums housing collections of direct importance to their professional development.

U.S. Dollar Equivalent in Egyptian Pounds	FY 1975 est.	5,000
U.S. Dollar Equivalent in Indian Rupees	FY 1975 est.	5,000
	FY 1974 est.	3,000
U.S. Dollar Equivalent in Pakistani Rupees	FY 1975 est.	5,000
	FY 1974 est.	1,000
U.S. Dollar Equivalent in Polish Zlotys	FY 1975 est.	5,000
	FY 1974 est.	2,000
U.S. Dollar Equivalent in Tunisian Dinars	FY 1975 est.	5,000

Institution	Title of Project
179. Office of Museum Programs, Smithsonian Institution, Washington, D. C.	International Museum and Cultural Monuments Consultations

In fulfilling its role as United States National Museum, the Smithsonian supports the participation of U. S. experts in the deliberations of UNESCO, the International Council of Museums (ICOM), and the International Center for the Study of the Preservation and Restoration of Cultural Property on the conservation of cultural monuments of international significance and on international museum developments of importance to the United States museum community.

U.S. Dollar Equivalent in Foreign Currencies	FY 1975	5,000
	FY 1974	6,000
	FY 1973	4,000

Institution	Title of Project
180. Office of Academic Programs, Smithsonian Institution, Washington, D. C.	Smithsonian Fellowship Program

The Smithsonian provides research fellowships for scholars capable of contributing to Smithsonian programs. The Foreign Currency Program supports the travel of fellows from excess currency countries as a dollar-saving measure.

U.S. Dollar Equivalent in Foreign Currencies	FY 1975 est.	2,000
	FY 1974	2,000
	FY 1973	1,000

b. New Multi-Country Museum Programs

None

E. GRANT ADMINISTRATION

	Institution	Title of Project
181.	Office of International Activities, Foreign Currency Program, Smithsonian Institution, Washington, D.C.	To Defray Costs of Grant Administration Payable in Foreign Currencies

In order to administer a national program of grants for research which is entirely conducted overseas, there is an irreducible minimum amount of time which must be spent on the ground in the countries abroad by program personnel. The program endeavors to keep administrative costs to a minimum but some are unavoidable. Some of the costs shown represent dollar savings (for example, for audit), since if the work were not done abroad at a cost in foreign currencies, it would have to be done in the U.S. at dollar cost. Administrative costs have remained a small percentage of the total program appropriation. A breakdown of costs and estimated costs for Fiscal Years 1973, 1974. 1975 follows:

U.S. Dollar Equivalent in Egyptian Pounds	FY 1975 est.	2,000
	FY 1974 est.	2,000
	FY 1973	7,000
	FY 1972	2,000
U.S. Dollar Equivalent in Indian Rupees	FY 1975 est.	2,000
	FY 1974 est.	2,000
	FY 1973	17,000
	FY 1972	5,000
U.S. Dollar Equivalent in Pakistani Rupees	FY 1975 est.	2,000
	FY 1974 est.	2,000
U.S. Dollar Equivalent in Polish Zloties	FY 1975 est.	2,000
	FY 1974 est.	2,000
	FY 1973	3,000
U.S. Dollar Equivalent in Tunisian Dinars	FY 1975 est.	2,000
	FY 1974 est.	2,000
	FY 1973	13,000
	FY 1972	2,000
U.S. Dollar Equivalent in Yugoslav Dinars	FY 1973	2,000
	FY 1972	2,000